

The South Vestibule of Hagia Sophia at Istanbul

The Ornamental Mosaics and the Private Door of the Patriarchate

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The southwest vestibule of Hagia Sophia in Istanbul is today the building's main exit, through which millions of visitors pass each year—3,250,000 in 2011 alone. The constant stream of people makes the vestibule appear awkward from both a formal and functional point of view. The room seems too tall and too narrow, and its upper zone lies so far outside the normal field of vision that one must stop walking and tilt the head back to see its sumptuous mosaics (cf. figs. 1–4). As the room is hardly wider than its doors, this creates congestion; one cannot linger, but must pass through it quickly, as if it were a corridor. Functionally, this does not make sense because the passage leads directly outside, where one would get more easily and comfortably without having to navigate through the vestibule. The whole arrangement seems out of keeping with the otherwise well-planned and well-proportioned church.

Possibly owing to its awkwardness, the south vestibule has so far received little scholarly attention. Only a figural mosaic in the lunette above the door to the narthex, which shows the enthroned Virgin and Child flanked by Constantine and Justinian as the principal founders of the church, has been researched extensively (fig. 4).¹ The ornamental mosaics of the walls and



FIG. 1 Hagia Sophia, Istanbul. South vestibule in the Ottoman period, looking north (photo after Fossati, *Aya Sofia*, 172)

1 Selected bibliography: T. Whittemore, *The Mosaics of St. Sophia at Istanbul: Second Preliminary Report; Work Done in 1933 and 1934; The Mosaics of the Southern Vestibule* (Paris, 1936), 29–31; idem, "On the Dating of Some Mosaics in Hagia Sophia," *BMMA* 5 (1946):

FIG. 2
South vestibule
as part of the
Ottoman
mosque (1939),
looking north
(photo courtesy
of Deutsches
Archäologisches
Institut, Istanbul,
R32696)

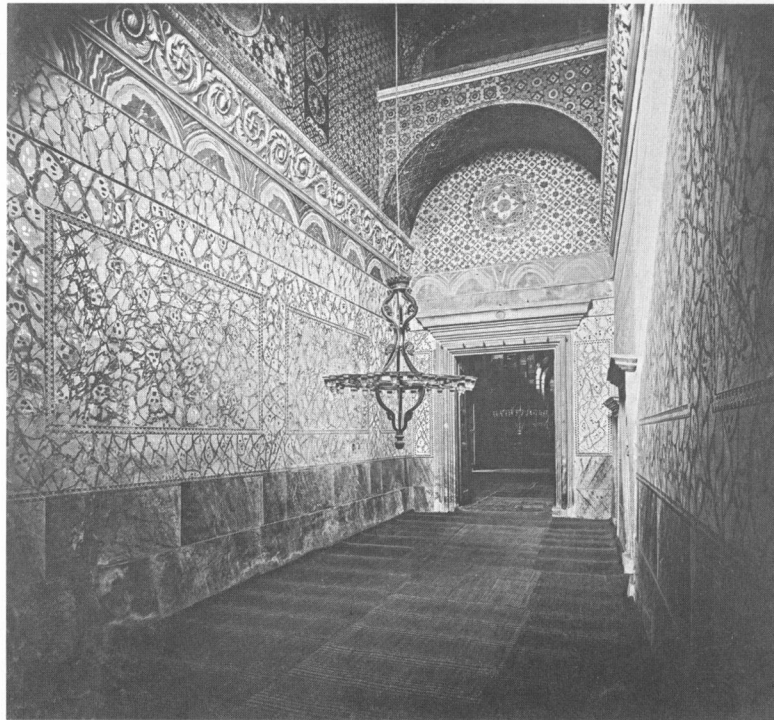


FIG. 3 South vestibule looking south (photo by authors)

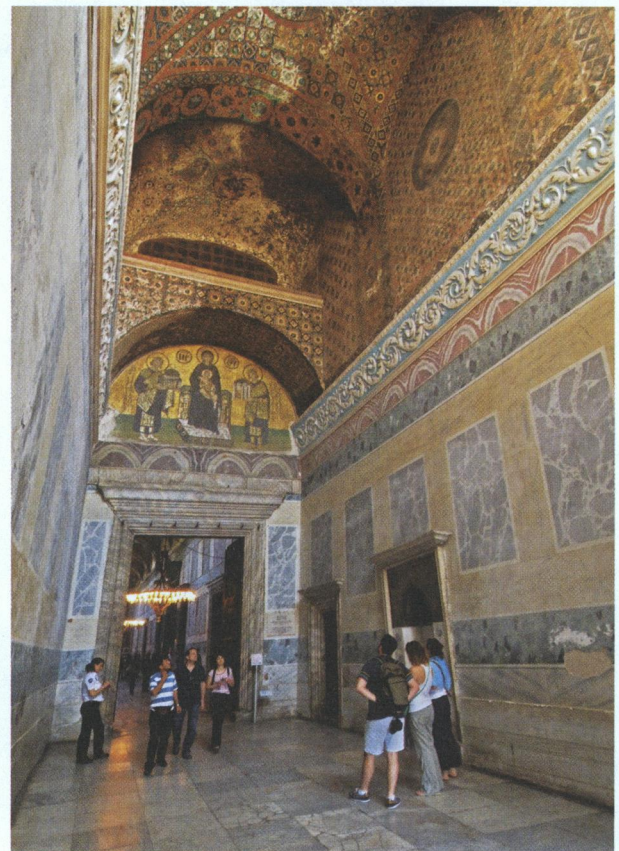


FIG. 4 South vestibule looking north (photo by authors)

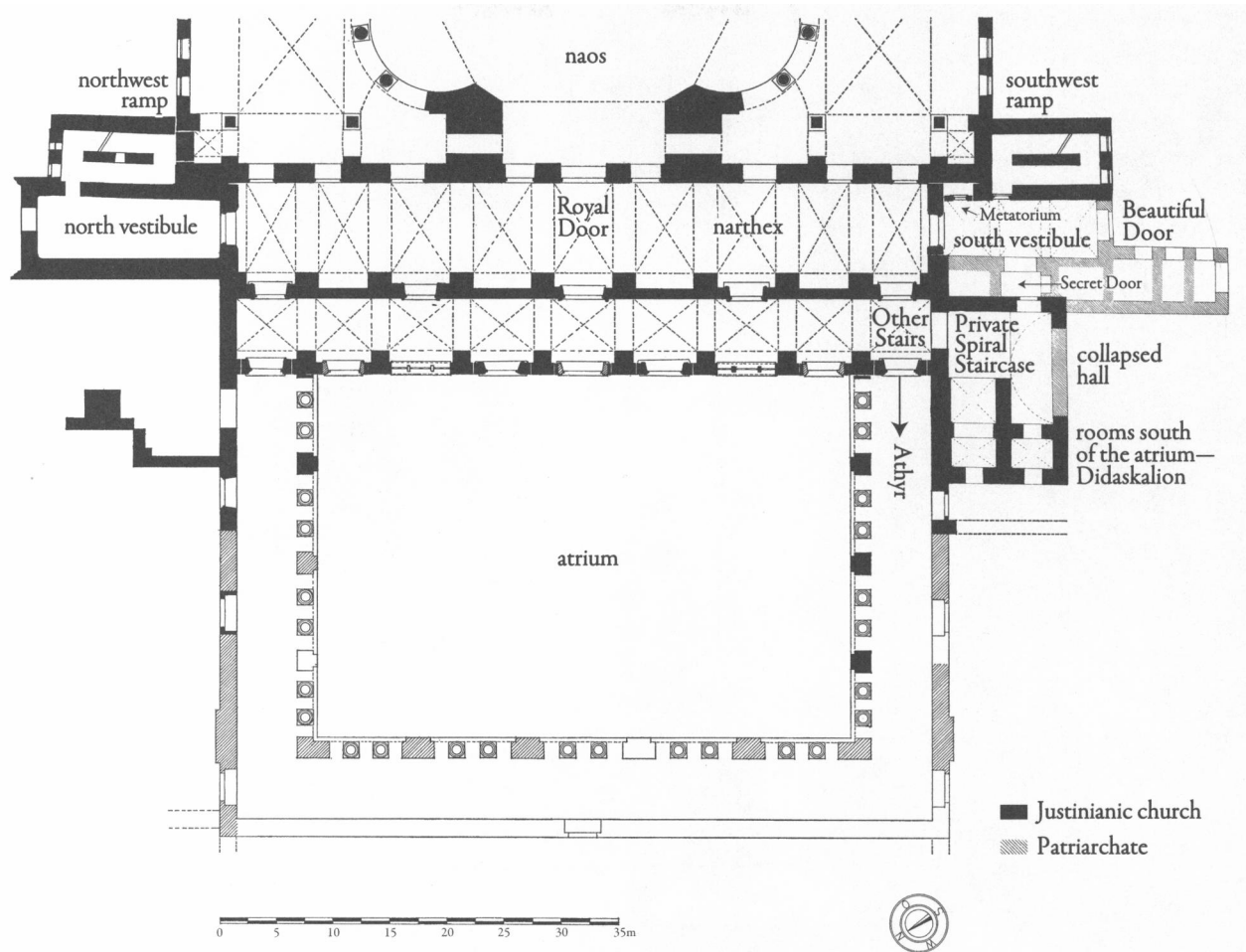


FIG. 5 Narthex, atrium, south vestibule, and adjacent buildings (prepared by P. Niewöhner after A. M. Schneider, *Westhof*, pl. 8; C. Strube, *Eingangseite*, pl. 1)

vaults, which along with the building history help to show that the vestibule was a later addition to the existing church, are still unpublished, and the architecture and structural history of the vestibule have been largely ignored. This paper will study first its architecture and building history and then its ornamental mosaic decoration. Together these suggest the vestibule originally functioned as an anteroom of the patriarchate and only later became the imperial entrance to the Great Church.

34–45; C. Mango, *Materials for the Study of the Mosaics of St. Sophia at Istanbul* (Washington, D.C., 1962), 23–25; A. Grabar, *L'empereur dans l'art byzantin* (Paris, 1968), 109–11; R. Cormack, "The Mother of God in the Mosaics of Hagia Sophia at Constantinople," in *Mother of God: Representations of the Virgin in Byzantine Art*, ed. M. Vassilaki (Milan, 2000), 107–23.

Architecture

The south vestibule forms the southern anteroom of the narthex (figs. 5–6). On leaving the narthex visitors enter the oblong vestibule, an unprepossessing narrow corridor that ranges from 4.92 to 5.55 meters wide and is 13.8 meters long,² and move swiftly on toward the light beyond the exit (fig. 3). A mirror above the exit draws attention to the figural mosaic to the rear, in the lunette above the door to the narthex (fig. 4). The position of this mosaic suggests that the vestibule was once traversed in the opposite direction and served as an

2 E. M. Antoniadou, *Ἐκφράσεις της Αγίας Σοφίας*, 3 vols. (Athens, 1907–83), 1:150; R. L. van Nice, *Saint Sophia in Istanbul* (Washington, D.C., 1965–86), pls. 13, 40.

FIG. 6
South vestibule and room above,
longitudinal section looking
east (after R. L. van Nice,
Saint Sophia, pl. 40; courtesy
Dumbarton Oaks Research
Library and Collection)

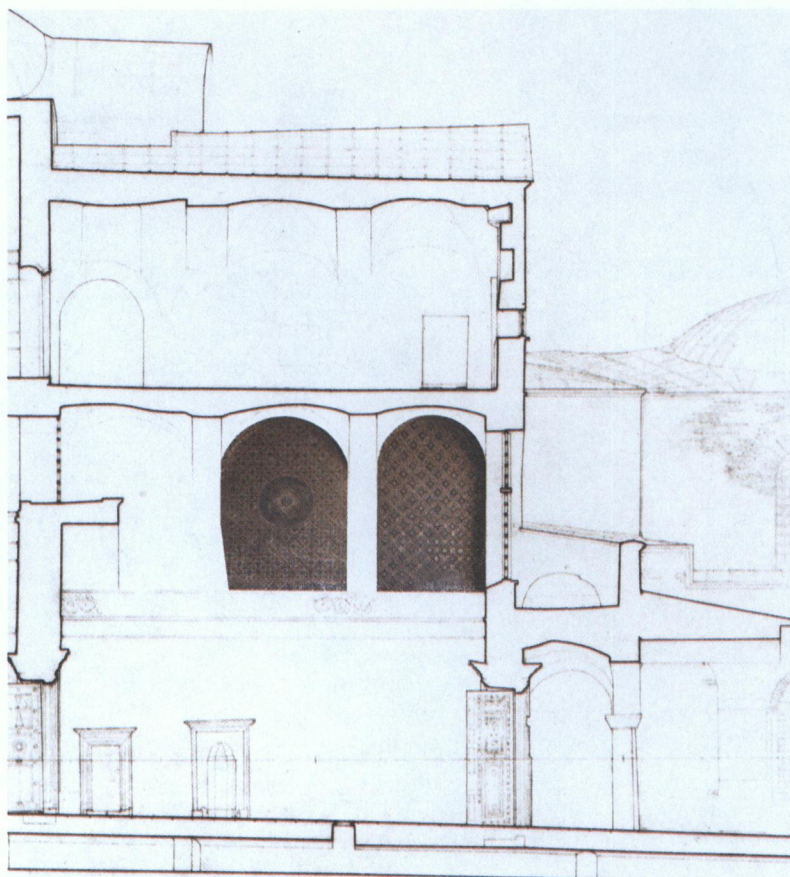


FIG. 7
Narthex as part of the Ottoman
mosque, looking south
(photo courtesy of Deutsches
Archäologisches Institut,
Istanbul, 4580)

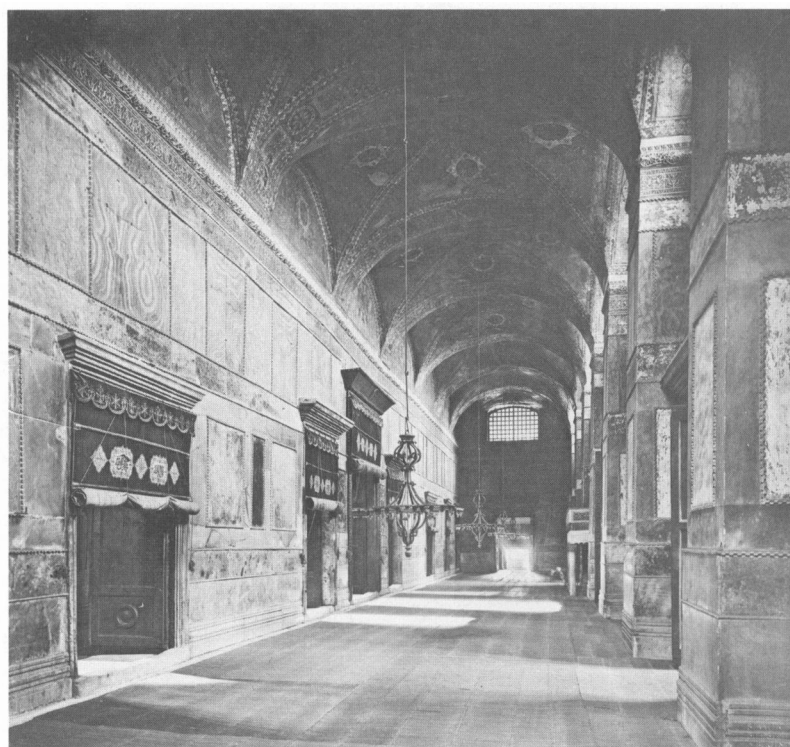




FIG. 8
Narthex looking south
(photo by P. Niewöhner)

entrance to the narthex. The lunette is framed by a barrel vault less than 2 meters deep, which spans the width of the room and hides the upper part of the north wall and a window into the narthex (cf. figs. 7–8). A second, larger window pierces the south wall above the door and admits ample daylight (fig. 3).

The south vestibule used to connect to the southwest ramp on the east and the rooms south of the atrium on the west (fig. 5), but the doorways were blocked up in the Ottoman period. The door to the ramp now contains a niche (figs. 3–4 and 6), and the doorway to the rooms south of the atrium has been hidden completely behind painted imitation marble veneer (figs. 1–2). At the northern end of the east wall another door opens into a tiny, cupboardlike room 3.1 meters wide and 1.5 meters long (figs. 4 and 6).³

3 Antoniades, *Ἐκφρασις*, 1:151–52.

In addition to the seemingly excessive height of the vestibule and the awkward arrangement of the barrel vault above the north lunette, likely added when the figural mosaic was executed in order to remedy the detrimental visual effect of an indeterminate dusky backdrop, deficits are caused by lack of symmetry. The door to the narthex is noticeably off-center toward the west (fig. 4), and the south door and window are markedly off-center toward the east (fig. 3). The two eastern doors are both in the northern half of the room and do not correspond with the partitions of the main vault (fig. 6); nor are the latter of equal size. The main vault is composed of three groin vaults and two separating arches, but none of the groins is square, and the northernmost is even narrower than the other two. These inconsistencies can be explained by the vestibule's building history, which demonstrates that it was part of a larger project that enlarged the southwest corner of Hagia Sophia after the reign of Justinian.

Building History

The window above the door to the narthex must originally have opened to the outside, suggesting that the vestibule was not part of Justinian's Great Church, but a later addition. The north vestibule, in contrast, is apparently part of the original building: the north side of the narthex is windowless and the north vestibule's masonry is bonded with the Justinianic northwest ramp.⁴ The south vestibule fills the gap between the Justinianic southwest ramp to the east and the rooms south of the atrium to the west (fig. 5). The latter are built with alternating layers of bricks and greenstone,⁵ the same kind of masonry attested in the Justinianic atrium,⁶ in the north vestibule,⁷ in the baptistery to the southeast of the southwest staircase,⁸ and in several other buildings in the capital that are linked to

Justinian or date to the sixth century.⁹ It appears that greenstone was employed mainly for Justinianic building projects in Constantinople and was not quarried outside the sixth century, confirming that the rooms south of the atrium were built contemporaneously with the Great Church or soon thereafter.

The row of three small chambers between the vestibule and the rooms south of the atrium and three more chambers farther to the south are also built with alternating layers of bricks and greenstone (fig. 9) and should therefore date from the sixth century as well.¹⁰ The three southernmost chambers today stand out in isolation beyond the bulk of the church complex (fig. 5), but they were originally integrated into a large hall on their western flank, traces of which can still be discerned on their west walls.¹¹ On the eastern side, these chambers protrude in front of the vestibule, partly obstructing its south facade; this is apparently why the south door and the south window of the vestibule had to be placed off center toward the east. It follows that the southernmost chambers were already in the picture when the vestibule was built. Conversely, the narrower width of the three chambers between the vestibule and the rooms south of the atrium makes allowance for the former, implying that this row of chambers was planned with the vestibule in mind.

The three small chambers between the vestibule and the rooms south of the atrium serve a triple purpose. First, they reduce the gap between the rooms south of the atrium and the southwest ramp sufficiently for the vestibule to be on an approximate axis with the south door of the narthex. Second, the central of the three chambers constituted a passage between the vestibule and the rooms south of the atrium and must have accommodated stairs, because the floor level inside the rooms south of the atrium is elevated 1.2 meters above

4 K. Dark and J. Kostenec, "A New Archaeological Study of Hagia Sophia, Istanbul," in *Proceedings of the 22nd International Congress of Byzantine Studies*, ed. I. Iliev (Sofia, 2011), 1:213–37, esp. 217.

5 A. M. Schneider, *Die Grabung im Westhof der Sophienkirche zu Istanbul*, *IstForsch* 12 (Berlin, 1941), 39–42; F. Dirimtekin, "Le local du Patriarcat à Sainte Sophie," *IstMitt* 13/14 (1963/64): 113–27, esp. 121; K. Dark and J. Kostenec, "Paul the Silentiary's Description of Hagia Sophia in the Light of New Archaeological Evidence," *BSI* 3 (2011): 88–105, esp. 92–93.

6 Schneider, *Westhof*, 23.

7 Dark and Kostenec, "New Archaeological Study," 217.

8 Schneider, *Westhof*, 23. Cf. F. Dirimtekin, "The Baptistry of Saint Sophia," *Türk Arkeoloji Dergisi* 12, no. 2 (1963 [1965]): 54–87, esp. 70 ("The form of structure of the interior walls of the building is identical to that of the reign of Justinian. The bricks used in the structure measure 39 × 39 × 4.55 cms. The mortar is like that in St Sophia"); S. Eyice, "Le baptistère de Sainte Sophie d'Istanbul," in *Atti del 9 Congresso internazionale di archeologia cristiana*, Studi di antichità cristiana 32, 2 vols. (Rome, 1978), 2:257–73, esp. 266–68 ("Les dimensions des briques et l'épaisseur de la couche de mortier y diffèrent sensiblement des dimensions de la maçonnerie de la façade voisine de Sainte Sophie. De même le mortier employé (au baptistère) diffère en qualité et en couleur de celui utilisé à l'église"); K. Dark and J. Kostenec, "The Byzantine Patriarchate of Constantinople and the Baptistry of the Church of Hagia Sophia in Istanbul," *Architectura* 36 (2006): 113–30, offer an "alternative interpretation" that the baptistery was part of the post-Justinianic patriarchate because of differently sized bricks, but later retract, because "there is no difference in the mean dimensions of the bricks used in the baptistery and those used in the neighboring Justinianic church (most of them are 37–38 cm long and 4.5–5 cm thick)": Dark and Kostenec, "Paul the Silentiary's Description," 105, n. 32.

9 U. Peschlow, *Die Irenenkirche in Istanbul*, *IstMitt* suppl. 18 (Tübingen, 1977), 221; idem, "Die Baugeschichte der Irenenkirche neu betrachtet," in *Architectural Studies in Memory of Richard Krautheimer*, ed. C. L. Striker (Mainz, 1996), 133–36, esp. 134. In addition to Justinianic buildings, the post-Justinianic peristyle and current Mosaic Museum in the Great Palace also employs alternating layers of bricks and greenstone: J. Bardill, *Brickstamps of Constantinople*, 2 vols. (Oxford, 2004), 1:134–47.

10 J. Kostenec kindly informed us that the bricks have the same dimensions as in the rooms south of the atrium.

11 Dark and Kostenec, "Patriarchate," 120–23; idem, "Paul the Silentiary's Description," 91–92.



FIG. 9
Central chamber to the
west of the south vestibule,
south wall with niche
and a layer of greenstone
(photo by J. Kostenec)

the ground; a similarly small chamber at the western end of the rooms south of the atrium seems also to have served as a passage and descends again to ground level.¹² Third, the same central chamber between the vestibule and the rooms south of the atrium also mediated between the different axes of the two rooms: it allowed for the west door of the vestibule to be placed centrally beneath the central groin vault, while the east door of the rooms south of the atrium lies farther south.

A similar compromise would explain the northern door in the east wall of the vestibule and the tiny, cupboardlike room behind it. The room fills what originally used to be a gap between the southwest ramp, the south aisle, and the narthex; the door hides

this irregularity from view and visually straightens the appearance of the vestibule's east wall. The north vestibule, which seems to have been erected as part of the original Justinianic building, has no gap.

The rather narrow interior space of the main room of the south vestibule would normally have been roofed at the level of the barrel vault above the north lunette (fig. 4). The uncommonly high main vault was clearly dictated by the need to accommodate a second story above the vestibule on the same level as the gallery of the church, with which it communicates through a large door (fig. 6).¹³ The vestibule therefore had to be the same height as the narthex. As to the vaulting, a barrel vault like that in the west gallery would have been the obvious choice given the

12 Schneider, *Westhof*, 41; Dark and Kostenec, "Paul the Silentiary's Description," 92–93, describe a vaulted substructure that creates the elevation and was later added to the original Justinianic building (both n. 5 above).

13 R. Cormack and E. J. W. Hawkins, "The Mosaics of St. Sophia at Istanbul: The Rooms above the Southwest Vestibule and Ramp," *DOP* 31 (1977): 175–251.



FIG. 10 South vestibule, tripartite main vault looking east (photo by authors)

elongated plan of the room. Instead, a more sophisticated tripartite groin vault was built (fig. 10). This may have been inspired by the narthex, where groin vaults were necessary because a barrel vault would have blocked the western windows (fig. 8). Moreover, the tripartite groin vault could be adapted to the irregular ground plan of the vestibule, above which a single barrel vault would have looked distorted.

Marble Veneer and Stucco Frieze

The interior decoration of the vestibule also followed the example of the narthex: marble veneer in the lower zone, a stucco frieze above the doors, and ornamental mosaics in the upper zone (cf. figs. 4 and 8). The stucco frieze runs along the long walls of the vestibule, marking off an upper zone that includes the barrel vault, the windows, and the tripartite main vault (figs. 3–4). Ernest Hawkins ascertained that the frieze is original to the building, when—with the help

of scaffolding—he was able to closely inspect it along with the stucco friezes in the narthex, the aisles, and the galleries.¹⁴ A corresponding stucco and inlaid frieze running beneath the windows is preserved on all four walls of the narthex (fig. 8),¹⁵ but the vestibule frieze is positioned lower, which seems appropriate to the narrower room. On the vestibule's short south wall no frieze has survived, and Gaspare and Giuseppe Fossati, who were charged with restoring Hagia Sophia from 1847 to 1849, had this area painted; the stucco may have been damaged and lost before that time due to rainwater entering through the window above. On the north wall of the vestibule the frieze is interrupted by the lunette above the door to the narthex (fig. 4).

14 E. S. W. Hawkins, "Pilaster and Stucco Cornices in Hagia Sophia—Istanbul," in *Actes du 12^e congrès international d'études byzantines*, 3 vols. (Belgrade, 1963–64), 3:131–35.

15 Hawkins, "Pilaster and Stucco."



FIG. 11 South vestibule, stucco frieze, west wall, north section (photo by authors)

Hawkins found that the friezes inside the Justinianic church were reproduced by the Fossati brothers according to lost originals, some of “which are to be seen in the drawings made by Loos in 1710.”¹⁶ The modern copies bear Italian stamps on their backs and replicate the same four models, one for the narthex, one for the aisles, one for the west gallery, and one for the north and south galleries. In contrast Hawkins found that in the vestibule

no two rinceaux are exactly alike.^[17] They have the spontaneous character of work executed directly and in situ. [. . .] The creamy-white lime stucco containing a binding of fine vegetable fiber was [. . .] modeled and tooled whilst in a plastic state and completed with sharply incised lines to give color and emphasize the directions of the foliage. At the west side of the lower part of the [figural] lunette mosaic nineteenth century [Fossati] plaster adjacent to the frieze was removed, and it is to be seen that the red frescoed, unset margin of the setting-bed and the intermediate rendering of the mosaic about the face of the stucco. The rinceaux are certainly of earlier date than the [figural] mosaic of the lunette and apart from the fact that they are constructed upon an integral part of the wall we might deduce from their style in comparison with the sixth century mosaic in the soffits of the exedras in the main body of the church^[18] and also from their striking affinity with the stucco work of San Vitale,

which is presumably antique,^[19] that they are contemporaneous with the construction of the vestibule.^[20]

It seems that the later stucco employed in the vestibule was of a better, more lasting quality than that used inside the Justinianic church. The only unaccounted loss occurred on the south wall, which may perhaps be explained by its position below the window (fig. 3). On the north wall the frieze would appear to have been taken down in the tenth century, when the figural mosaic was executed in the lunette (fig. 4).

The painted imitation marble veneer below the frieze was changed in the twentieth century (figs. 3–4), but similar painting was already in place in the Ottoman period (fig. 2); originally the walls would have been clad in real marble.

Ornamental Mosaics

Above the level of the frieze the upper zone is covered by ornamental mosaics with rich carpet patterns and muted colors (fig. 10). The lunette above the north door contains the only figural mosaic; both the mosaic and the barrel vault sheltering it date from the tenth century. The ornamental mosaics are older and, as we shall argue, were executed when the vestibule was originally built; they imitate the narthex decoration and are consistent with a post-Justinianic date in the later sixth century.

Although the ornamental mosaic decoration of the south vestibule has never been properly published, some scholars have treated it in the context of Hagia Sophia as a whole or in the context of the figural

16 Cf. Mango, *Materials* (n. 1 above), pls. 22, 40–41.

17 See figure 11.

18 B. Fourlas, *Die Mosaiken der Acheiropoietos-Basilika in Thessaloniki: Eine vergleichende Analyse dekorativer Mosaiken des 5. und 6. Jahrhunderts*, Millennium Studies 35 (Berlin, 2012), 235–38, pls. 119f., figs. 400–402.

19 Cf. P. Angiolini Martinelli, ed., *La Basilica di San Vitale a Ravenna*, *Mirabilia Italiae* 6, 2 vols. (Modena, 1997), 1:171–76; 2:86, 90–93.

20 Hawkins, “Pilaster and Stucco,” 133–34.

mosaics. Gaspare Fossati was the first to properly study the vestibule. He made drawings of the entire vestibule, as well as detailed sketches of parts of the ornamental mosaics. A handsome lithograph of the restored vestibule was included in an album he presented to Sultan Abdul Medjid, who commissioned the restoration (fig. 1).²¹ In addition, Gaspare produced a series of smaller drawings and watercolor samples from different sections of the vestibule's walls and vaults, some of which are accompanied by notes indicating the locations of the patterns. These materials are distributed throughout another album that is today kept in the Fossati archive at the Archivio di Stato del Cantone Ticino in Bellinzona.²²

By the 1930s, Hagia Sophia had become a museum, and the Byzantine Institute, directed by Thomas Whittemore, undertook to reveal the figural mosaics covered by painted ornament during the Ottoman period. William Gregory and other Byzantine Institute conservators also obtained information on and samples of the plaster, tesserae, color palette, and state of preservation of the ornamental mosaics, in so far as this was possible from scaffolding placed beneath the barrel vault

in front of the north lunette.²³ Whittemore announced his intention to write about the ornamental mosaics,²⁴ but this project was never realized. Since his death in 1950 only a couple of his black and white photographs have been published.²⁵ Otherwise, all materials gathered by the Byzantine Institute of America remain archived at Dumbarton Oaks.

State of Preservation

The ornamental mosaics of the south vestibule are mostly covered with paint, and only a few tesserae remain exposed, especially on the ceiling. The paint was applied by the Fossati brothers partly to hide Christian figures and symbols, partly to repair missing tesserae and smaller lacunae, and partly to cover larger segments of the walls and vaults where the mosaics had been lost completely. In the 1930s the conservators of the Byzantine Institute established that mosaics are preserved mainly on the east wall and on the eastern half of the main vaults, on the central bay of the west wall, and on the vault above the north lunette. The western half of the main vaults, the northern and southern bays of the west wall, and the north wall have lost most of their mosaics, as has the facing of the vault above the north lunette. The south wall preserves fragments of mosaic, especially on the eastern reveal of the window.²⁶

Within the preserved sections of mosaic the conservators encountered numerous iron clamps that the Fossati brothers had installed to consolidate loose parts. By the 1930s many of these were corroded and had to be replaced with copper.²⁷ Elsewhere, the plaster

21 G. Fossati, *Aya Sofia, Constantinople, as Recently Restored by Order of H. M. the Sultan Abdul Medjid* (London, 1852), 172; idem, *Die Hagia Sophia: Nach dem Tafelwerk von 1852*, ed. U. Peschlow (Dortmund, 1989), 73; *600 Yıllık Ayasofya Görünümleri ve 1847–49 Fossati Restorasyonu* (Istanbul, 2000), no. 71 p. 143.

22 See Mango, *Materials*, 23 (Arcivio Fosati Morcote Bellinzona 333r and 340r); *Die Hagia Sophia in Istanbul: Bilder aus sechs Jahrhunderten und Gaspare Fossatis Restaurierung der Jahre 1847 bis 1849*, ed. V. Hoffmann (Bern, 1999), 184 no. 24 (AFMB 340r); 209 no. 51 (Rotes Lederalbum 21); 210 no. 52 (RLA 43); 210 no. 53 (RLA 46); *600 Yıllık Ayasofya Görünümleri*, 132 no. 60 (= RLA 21); 133 no. 62 (= RLA 46).

Page 21 of the album depicts four small samples executed in pencil and watercolor, including a watercolor with a diaper pattern from the vault above the north lunette. Four other images show various patterns from the vaults and walls. Page 46 includes three watercolors from the south vestibule. Two of them are dedicated to the medallion with cross on the west wall, one being a dimly visible pencil sketch of the whole wall and the other a larger detail of the left half of the medallion and cross. The latter shows the cross with tailed teardrop ends that are not currently visible in the vestibule but may be hidden beneath the painted ornaments that the Fossati brothers applied in order to hide Christian symbols. The third watercolor on page 46 contains samples of the patterning on the vault above the north lunette and the ornaments on the transversal arches. Page 340 shows the entire north wall of the vestibule, including the mosaic.

23 For the position of the scaffolding see Whittemore, *Vestibule* (n. 1 above), pls. 1–4.

24 Ibid., 8.

25 E. J. W. Hawkins and C. Mango, "The Mosaics of St. Sophia at Istanbul: The Church Fathers in the North Tympanum," *DOP* 26 (1972): 2–41, esp. 33 fig. 58; Cormack and Hawkins, "Rooms Above" (n. 13 above), 197–98 fig. 9.

26 W. J. Gregory, "Observations I," 18–31 August 1938, MS.BZ.004-02-01-02-169, The Byzantine Institute and Dumbarton Oaks Fieldwork Records and Papers, ca. late 1920s–2000s, Image Collections and Fieldwork Archives, Dumbarton Oaks, Trustees for Harvard University, Washington, D.C.; R. A. Gregory, "Notes Taken While Working on the Vestibule Panel and General Notes of Work in Narthex and Barrel Vaulting," 1933, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-041.

27 R. A. Gregory, "General Notes on Work in the Narthex and Barrel Vaulting in 1933," MS.BZ.004-02-01-02-042; idem, "Notes of

that the Fossati brothers had applied to replace lost mosaics was found to cover existing mosaics. In spite of these shortcomings the conservators of the Byzantine Institute praised the Fossati restoration for the verisimilitude of the fresco patterns and colors: “[The] patterns are at present [covered] with Fossati paint. It appears on closer observation, however, that the colors painted over tessellatae are the same as [the] original colors of [the] mosaics, and actually the patterns at present have the same colors and drawings as [the] original patterns.”²⁸ Thus the Fossati paint preserves the traditional appearance of the vestibule.

The following description is based on personal inspection from the ground as well as on notes by William Gregory, who studied, sketched, and described the mosaics from scaffolding put up mainly to reach the figural mosaic in the lunette above the door to the narthex.²⁹ This position also allowed for close access to the barrel vault above the lunette, but not to the main vaults and walls. All quotations and measurements are taken from notes archived at Dumbarton Oaks.³⁰

Overview and Chronology of the Mosaic Ornament

MAIN VAULTS AND WALLS

Mosaics cover the upper parts of the walls and the vaulting of the vestibule. The stucco frieze demarcating the zone above the level of the doors forms the upper frame of the wall revetment below. Both elements consist of natural patterns that are light in color—geological in the case of the wall revetment and vegetal in the case of the frieze—and both are continuous across the length of the room (figs. 3–4). In contrast, the mosaics employ geometric patterns in dark colors that subdivide the vestibule into three bays and sit

heavily on the lighter zone below. The subdivision of the upper zone reflects the tripartite groin vault of the narthex, which is likewise decorated with geometric mosaics (figs. 8 and 12). While the mosaics of the vestibule and the narthex follow the same general layout, in the vestibule, where the stucco frieze is positioned lower, they also cover the upper part of the walls. Moreover, the large areas of gold that distinguish the narthex mosaics are foregone in the vestibule in favor of deeply colored carpet patterns. The transversal arches of the narthex and vestibule are highlighted by wide bands of large geometric motifs that are alternately angular and round (figs. 10 and 12–15). Further, each bay is framed by a narrower band of either smaller ovals, in the narthex (figs. 14 and 16), or lozenges, in the vestibule (figs. 17–23), which also follow the contours of the groins diagonally across the vaults and encircle the center point.

The carpet patterns in the vaults of the vestibule are larger and louder than those on the walls, but the background is of white marble. The first and the third bay share the same two patterns, one in the vaults (figs. 17 and 18) and another on the walls (figs. 19 and 24–25), while those in the central bay are different (figs. 20–21, 23, and 26). The central bay is also distinguished by a large medallion containing a cross in the center of each wall (figs. 21 and 27). The reveal around the window that comprises almost the entire south wall of the vestibule also retains some traces of mosaic. These have been painted grey, but on the east side a band of lozenges with gold and blue tesserae is just visible. This is similar to the bands of lozenges that frame the bays and appears to have outlined the entire window.

TRANSVERSAL ARCHES

Gregory noted that in the transversal arches (figs. 10 and 13) two motifs are repeated, “one being a diamond shaped lozenge with [a] circle in [the] center and half circles at [the] sides, the other being a circular pattern with a [...] maple leaf in the center.” The diamond is set in gold with what appears to be a green (?)³¹ medallion in the center that forms the ground for

Work at St. Sophia I,” 22 April–12 July 1934,” ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-060.

28 W. J. Gregory, “Observation Book II,” 30 October 1934, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-073.

29 Cf. Whittemore, *Vestibule* (n. 1 above), 7.

30 W. J. Gregory, “Observation Book II,” 9–28 October 1934, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-067; R. A. Gregory, “Notes Taken While Working on the Vestibule Panel and General Notes of Work in Narthex and Barrel Vaulting,” 1933, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-041; W. J. Gregory, “Observations I,” 18–31 August, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-169. Unattributed quotations from Gregory derive from archival documents cited above in notes 26–30.

31 Here and below question marks in parentheses indicate that tesserae have not been inspected from close up, i.e., from scaffolding, and that due to the Ottoman paint overlay their colors cannot be determined with certainty.

FIG. 12
Narthex, central bay
looking east (photo
by P. Niewöhner)



FIG. 13
South vestibule, southern
transversal arch, east wall
(photo by authors)





FIG. 14
Narthex, central bay,
southern transversal arch
(photo by P. Niewöhner)

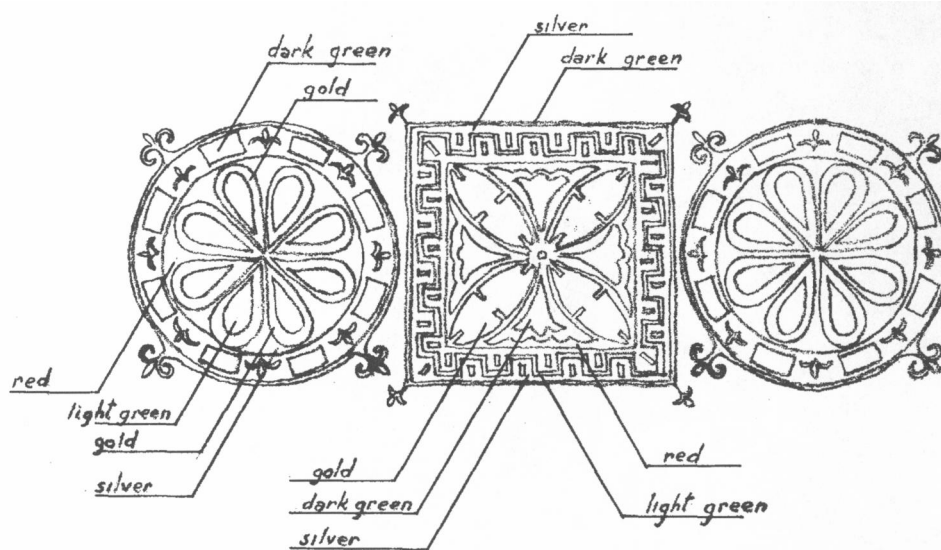


FIG. 15
Narthex, central
bay, transversal arch
(Byzantine Institute,
MS.BZ.004-1993.
Fo470, Image
Collections and
Fieldwork Archives,
Dumbarton Oaks,
Washington, D.C.)

an eight-petalled marble flower. The half circles are also green (?) and each contains half a flower. These and the diamonds are outlined by a band of white marble that has red contours and contains alternating red squares and green trefoils, as if studded with gems. The maple leaf is made partly of lighter and partly of darker greens (?). It stands on a ground of horizontal rows of gold tesserae set at an angle. A round outer frame may again be described as a band of white marble that has red contours and in this case contains a red meander with green (?) accents, also reminiscent of gemstones. The

ground outside these motifs is likewise gold, with green (?) trefoils in the gaps.

BANDS OF LOZENGES

Each bay is framed by a band of lozenges (fig. 22), but only the central bay has an additional inner saw-tooth frame of eight or nine rows of red glass and white marble (fig. 23). The band of lozenges is framed by a single line of what Gregory identified as “blue (?)” on both sides. The large main lozenges and the smaller secondary ones that flank the meeting points are outlined by

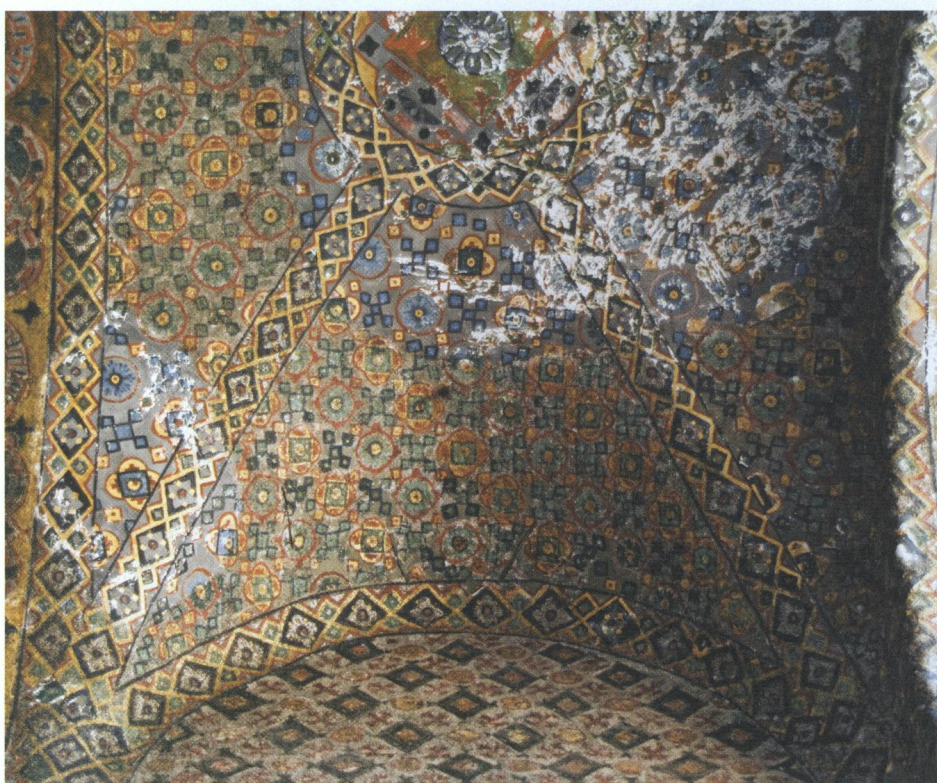


FIG. 18 South vestibule, southern groin vault looking east (photo by authors)



FIG. 19 South vestibule, south bay, east wall (photo by authors)



FIG. 20 South vestibule, central groin vault looking east (photo by authors)



FIG. 21 South vestibule, central bay, east wall (photo by authors)



FIG. 22 South vestibule, southern groin vault, detail (photo by authors)



FIG. 23 South vestibule, central groin vault, detail (photo by authors)

VAULT SURFACE: CENTRAL BAY

The patterning in the vaulting of the central bay consists solely of alternating medallions and lozenges (fig. 23). Each medallion has a silver core, an inner ring of what appears to be blue (?), an outer ring of gold, and a thin frame of red that forms eight tendrils, every second of which ends in a tail. The tailed tendrils point toward the neighboring medallions, and the gaps contain small green tetrafoils. The lozenges are flanked by half circles, and this whole motif is surrounded by a single blue (?) line. The lozenges and half circles are outlined in green

with a gold core, and the half circles contain a central red dot. The gold core of the lozenges is set off from the green outline by a band (?) of red and from a silver core by a band (?) of green.

WALL SURFACE: NORTH AND SOUTH BAYS

The carpet pattern on the east wall of the south bay is made up of sixteen rows of six lozenges and three shorter rows in the lunette below the vault (fig. 19). The same pattern also covers the east wall of the north bay. Each lozenge consists of a “gold [core with tesserae] set at an angle,” surrounded by “a single line of red glass tessellae” and with an outer frame of “blue glass tessellae” that terminates in v-shaped spandrels at all four corners (figs. 24–25). The height of the lozenge is 16–18 centimeters and the total height including spandrels is 25–27 centimeters. Each side of the lozenge is 13–14 centimeters long, with an inner square delineated by a red line of 6–7 centimeters.

The horizontal and the vertical gaps between lozenges are filled with small medallions of “green glass tessellae” that contain a “cross of single lines of red glass tessellae” within “gold tessellae set in horizontal lines and [. . .] at an angle.” Each medallion has a diameter of 14–14.5 centimeters. The diagonal gaps between lozenges contain the figure X with tailed ends composed “of a single line of red glass tessellae.” The arms of the x are 14.5–15.5 centimeters long.

WALL SURFACE: CENTRAL BAY

The central bay of the east wall is decorated with eighteen rows of lozenges (fig. 21). Not counting the medallion, the lower fifteen rows alternate between six and seven lozenges, while the three top rows in the lunette below the vault are shorter. Each lozenge consists of what appears to be a turquoise core with a differently colored spot in the center, a gold frame, and a red outer frame that forms an eight-pointed star with turquoise (?) outer tendrils (fig. 26). The tendrils of diagonally neighboring lozenges are contiguous and form a swastika. The horizontal and vertical gaps between lozenges are larger and each contains a turquoise (?) eight-pointed star with a red dot in the center.

MEDALLIONS IN THE CENTRAL BAY

On the west wall the medallion is placed as low as possible above the bottom frame (fig. 10). “The circular pattern [. . .] is a cross of what appears from the



FIG. 24 South vestibule, north bay, east wall, detail (photo by authors)



FIG. 25 South vestibule, south bay, east wall, detail (photo by authors)



FIG. 26 South vestibule, central bay, east wall, detail (photo by authors)

ground and the scaffold to be of gold tessellae set at an angle" (fig. 27–28). Other tesserae form bands that radiate diagonally from the center of the cross and were probably meant to depict beams of light.³² The Fossati brothers had the cross painted over with a geometric motif that also appears on the transversal ribs, where it is original (fig. 13). The eastern medallion has a higher position off center toward the south (fig. 21). It contains the same gold cross with radiating beams of light as on the west wall.

BARREL VAULT ABOVE THE NORTH LUNETTE

The surface of the barrel vault above the north lunette (fig. 29) is also framed by a narrow band of small lozenges and filled in with a carpet pattern similar to that in the vaults of the first and third bays. The individual motifs, however, are different and have been simplified in comparison with the main vaults. Here "the work is not very accurate; the outlines of the geometrical motifs are somewhat distorted and unevenly drawn." This and the lack of a lozenge border on the walls of the northern bay, where they are met by the barrel vault, confirm that the barrel vault is a later addition.

The band of lozenges is "36 cm wide" and has a "silver background. The lozenges, 26 × 22 cm, are blue [glass], outlined in gold and have in the middle a silver four lobed flower motif with, in its center, a circle composed of three concentric rows: red [glass], blue [glass] and white [marble]. Two adjacent lozenges of a smaller size, 7 × 6 cm, are placed vertically between the larger lozenges. These small lozenges are green [glass] with a little silver square in the middle. Both motifs are outlined by a red [glass] zigzag stripe. The whole band is bordered on both sides by a narrow edge of blue [glass]." The network of this mosaic carpet

consists of lozenges, each side of which is composed of three small rectangles, 6 × 7 cm, connected by their two angles. The rectangle is made of white [marble] tessellae and is thickly outlined by a double row of green [glass] tessellae. In the intersections of these rows of small rectangles are placed larger rather irregular squares, 8 × 7.8 cm, with a gold center and a double edge in red [glass].

32 For similar crosses with radiating beams see below.



FIG. 27 South vestibule, central bay, west wall, central medallion (photo by authors)



FIG. 28 South vestibule, central bay, west wall, detail to the lower right of the central medallion (photo by authors)

The center of each compartment of this trellis is occupied by one of [...] three geometrical motives [...], which stand out against a white [marble] background. These motives are arranged in alternating rows. One of these central patterns represents an irregular square, 20.8×19.5 cm, set on its angle and outlined [by a double band of] red [glass]. The gold field of this square contains another inner cross-set square, 7.5×7.8 [cm], outlined in green [glass]. In the middle of its sides springs a small tendril. The center of the inner square is equally gold.

The second pattern has the shape of a rosette with four lobes, 15 cm in diameter, outlined by a double row of green [glass] and having a filling in gold. This rosette contains also a green [glass] square, 11×11 cm, with a gold circle in the middle [diam. 6.5 cm, except one rosette in the most western band which contains a square instead of a circle]. A small tendril is also projecting from each side of the square [the central circles each contain an x]. The third



FIG. 29 South vestibule, barrel vault above the north lunette, central part (photo by authors)

pattern of this composition has the same shape as the previous one with the only difference that the inscribed square is only edged in green [glass], its ground being gold. It has no circle in the middle but another smaller square in gold.

With regard to workmanship, the conservators observed an inferior quality in the barrel vault above the north lunette compared to the walls and main vault: the “[m]osaics of the barrel vault are less regularly executed and although the same patterns are used, they are simplified. This as well as a missing border where the northern compartment of the east wall meets the barrel vault confirms that the latter is a later addition. The mosaics of the barrel vault imitate those of the walls and main vaults, and the [glass] tesserae may be reused and have come from those parts of the northern bay that were built over by the barrel vault.”³³

Formal Repertoire of the Earlier Ornament

The vestibule mosaics were apparently inspired by and borrowed from the Justinianic mosaics of the main church. The formal repertoire connects them with the narthex. In both cases, similar geometric patterns

contain crosses, which are the only religious images. There are, however, major differences, for example the almost exclusive concentration on geometric patterns in the vestibule versus the variety of floral motifs in the narthex. More importantly, the vestibule mosaics cover large surfaces by repetition of the same motifs in a carpetlike manner not normally employed in the Justinianic decoration of the main church, where it is confined to the small, narrow, and low tunnel vaults beneath the piers (figs. 30–33).³⁴ Furthermore, the decoration of the vestibule introduces new motifs that were not previously used in Hagia Sophia and need to be distinguished from the formal repertoire of the Justinianic church.

Several traits of the vestibule mosaics apparently came about by eclectic borrowing from the Justinianic mosaics of the main church. The decoration of the transversal arches, for example, is similar in the vestibule and in the narthex. In both cases, large medallions alternate with angular motifs—diamonds in the vestibule (figs. 10 and 13), squares in the narthex (figs. 12 and 14–15). A meander border is employed on the medallions in the vestibule and on the squares in the narthex.³⁵ The leaf motif at the center of the vestibule medallions, on the other hand, seems to be borrowed from the small domical vault in the south aisle (fig. 34) or the squinches that flank the eastern exedrae in the north and south galleries (figs. 35–36).

Bands of lozenges framing the walls and main vault are similar to ones found in the Justinianic narthex mosaics of Hagia Irene (figs. 37–38).³⁶ Better preserved are opus sectile wall revetments on the eastern and western naos walls of Hagia Sophia,³⁷

34 E. Russo, *Le decorazioni di Isidoro il Giovane per S. Sofia di Costantinopoli* (Rome, 2011), 135–37, figs. 293–301.

35 Cf. also diamonds with semicircles on the sides in later mosaics of St. Sophia: Hawkins and Mango, “Church Fathers” (n. 25 above), 31–33, figs. 58, 60.

36 For the dating of the narthex see W. S. George, *The Church of Saint Eirene at Constantinople* (London, 1912), 12–16, pl. 25; A. Taddei, “Remarks on the Decorative Wall-Mosaics of Saint Eirene at Constantinople,” in *Mosaics of Turkey and Parallel Developments in the Rest of the Ancient and Medieval World: Questions of Iconography, Style and Technique from the Beginnings of Mosaic until the Late Byzantine Era*, ed. M. Şahin (Istanbul, 2011), 883–96, esp. 885–86.

37 J. C. Anderson, “Introduction to the Ornamental Tiles,” in *A Lost Art Rediscovered: The Architectural Ceramics of Byzantium*, ed. S. E. J. Gerstel and J. A. Lauffenburger (University Park, PA, 2001), 105; A. Guiglia Guidobaldi, “I marmi di Santa Sofia di

33 B. N. Ermoloff, “Preliminary Study: Mosaics of the Barrel Vaultings in the North and South Passages and Vestibule,” ICFA, Dumbarton Oaks, MS.BZ.004-02-02-03-328. This description is based on earlier records and descriptions made by Richard A. Gregory.



FIG. 30 South aisle, tunnel vault beneath west pier (photo by P. Niewöhner)



FIG. 32 Nave, tunnel vault beneath northwest pier (photo by P. Niewöhner)

in San Vitale at Ravenna,³⁸ and in the Euphrasius Cathedral at Poreč.³⁹ The two Adriatic churches were built later in Justinian's reign and employ marbles from Proconnesus/Constantinople.⁴⁰ Still later, at

Constantinopoli," in *Medioevo mediterraneo: l'Occidente, Bisanzio e l'Islam*, ed. A. C. Quintavalle (Parma, 2007), 165, fig. 15.

38 A. Terry, "The *Opus Sectile* in the Euphrasius Cathedral at Poreč," *DOP* 40 (1986): 147–64, fig. 29.

39 *Ibid.*, figs. 5, 13.

40 F. W. Deichmann, *Ravenna, Hauptstadt des Spätantiken Abendlandes* (Wiesbaden, 1969–89); A. Terry, "The Sculpture at the

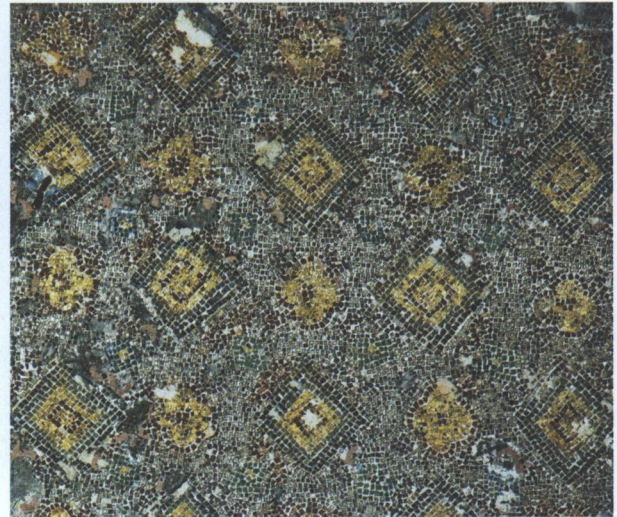


FIG. 31 South aisle, tunnel vault beneath east pier (photo by P. Niewöhner)



FIG. 33 Nave, tunnel vault beneath southwest pier (photo by P. Niewöhner)

the end of the ninth or early in the tenth century, the lunettes with Church Fathers in the north tympanum of Hagia Sophia were again framed with lozenge patterns.⁴¹ During the first decade of the tenth century a

Cathedral of Eufrasius in Poreč," *DOP* 42 (1988): 13–64 esp. 55–59; M. Pilutti Namer, "I capitelli di navata della basilica di Santa Eufemia e della chiesa di Santa Maria delle Grazie a Grado," *Annali della Scuola Normale Superiore di Pisa* ser. 4 vol. 9 (2004 [2008]): 269–303.

41 Hawkins and Mango, "Church Fathers" (n. 25 above), 14, fig. 26, call this ornament a diaper pattern. For Salzenberg's watercolor showing this pattern in the north and south tympana see Mango, *Materials* (n. 1 above), figs. 60, 65. On the use of lozenge



FIG. 34 South aisle, small domical vault at east end (photo by P. Niewöhner)



FIG. 35 South gallery, squinch next to the eastern exedra (photo by P. Niewöhner)

FIG. 36 North gallery, squinch next to the eastern exedra (photo by P. Niewöhner)

border below the portrait of the emperor Alexander in the north gallery was decorated with lozenge patterns.⁴²

In provincial murals lozenge patterns are even more frequently attested from the sixth century onward and were typically employed to outline architectural features, e.g., the south lunette of the principal church in the monastery near Kartmin from ca. 512⁴³

patterns in the middle Byzantine period see Anderson, "Ornamental Tiles," 105–8.

42 E. J. W. Hawkins and P. A. Underwood, "The Mosaics of Hagia Sophia at Istanbul: The Portrait of the Emperor Alexander; A Report on Work Done by the Byzantine Institute in 1959 and 1960," *DOP* 15 (1961): 187–215, fig. 11; N. Teteriatnikov, "Why Is He Hiding? The Mosaic of the Emperor Alexander in Hagia Sophia, Constantinople," *Arte Medievale* ser. 4, vol. 2 (2012): 61–76.

43 E. J. W. Hawkins and M. C. Mundell, "The Mosaics of the Monastery of Mār Samuel, Mār Simeon, and Mār Gabriel near



FIG. 37 Hagia Irene, Istanbul. Narthex, central section, north bay, soffit of the north arch (photo by P. Niewöhner)



FIG. 38 Hagia Irene, Istanbul. Narthex, central section, south bay, soffit of the west arch (photo by P. Niewöhner)

and arches and spandrels in the Dome of the Rock at Jerusalem from ca. 691.⁴⁴ Fresco lozenges have survived in the Egyptian desert, at the Red Monastery near Sohag, and at the monastery of Apollo at Bawit, where

they also outline architectural features and date from the sixth and seventh centuries.⁴⁵ Similarly, the arches

Kartmin; with a Note on the Greek Inscription by Cyril Mango," *DOP* 27 (1973): 279–95, figs. 33–34 pl. A.

44 O. Grabar, *The Dome of the Rock* (New York, 1996), figs. 86–87, 101.

45 G. Gabra, *Cairo: The Coptic Museum, Old Churches* (Cairo, 1993), 58–59; A. Badawy, *Coptic Art and Archaeology: The Art of Christian Egyptians from the Late Antique to the Middle Ages* (Cambridge, Mass., 1978), 248–50, fig. 4.21; E. S. Bolman, "Late Antique Aesthetics, Chromophobia, and the Red Monastery, Sohag, Egypt," *Eastern Christian Art* 3 (2006): 1–24, esp. 14, pls. 12, 13, 16.



FIG. 39 South gallery, squinch next to western exedra (photo by P. Niewöhner)



FIG. 40 North gallery, squinch next to western exedra (photo by P. Niewöhner)

of the canon tables in the Rabbula Gospels from ca. 586 are outlined with lozenges.⁴⁶

46 On fols. 6b, 8a, 16: M. Bernabò, *Il Tetravangelo di Rabbula*, Firenze, Biblioteca medicea laurenziana, Plut. 1.56: *L'illustrazione del Nuovo Testamento nella Siria del 6 secolo* (Rome, 2008), pls. 2, 12, 15. See also the facsimile edition: *Plut. I, 56, Medicaean-Laurentian Library*, ed. C. Cecchelli, G. Furlani, and M. Salmi (Olten, 1959). For the relationship between architectural decoration and manuscripts, specifically in the Rabbula Gospels, cf. J. C.

Medallions like those in the checkerboard carpet pattern covering the central groin vault of the vestibule (fig. 23) were common in the eastern Mediterranean,⁴⁷ but the tendrils that grow from the vestibule medallions are not so widely attested and started to appear only from the sixth century onward, for example in the Justinianic mosaics of the narthex and naos of Hagia Sophia (figs. 14 and 39–40).⁴⁸ A carpet pattern with similar medallions without tendrils but interspaced with small leaves is found in the Justinianic narthex mosaics of Hagia Irene (fig. 37) and the chlamys of the saint to the right of the Virgin and Child in the homonymous Sinai icon.⁴⁹

The lozenges with flanking half circles that alternate with the medallions in the central groin vault of the vestibule (fig. 23) may have been inspired by similar motifs in the Justinianic mosaic of the squinch flanking the west exedra in the north gallery of Hagia Sophia (fig. 40). The same pattern also occurs on the mosaic pavement of San Vitale in Ravenna (fig. 41) and on a garment from the sixth or seventh century conserved in the Museum für Angewandte Kunst in Vienna.⁵⁰

Diaper patterns like those in the northern and southern groin vaults of the vestibule (figs. 17 and 22) were popular in late antique floor mosaics,⁵¹ especially in Palestine⁵² and Syria.⁵³ In the mosaics of Hagia

Anderson, "Tiles, Books, and the 'Church Like a Bride Adorned with Pearls and Gold'," in *A Lost Art Rediscovered* (n. 37 above), 119–41, esp. 122–26.

47 J. Trilling, *The Medallion Style: A Study in the Origins of Byzantine Taste* (New York, 1985); O. Grabar, *The Mediation of Ornament* (Princeton, 1992).

48 C. Mango, *A Vision for Empires* (Istanbul, 1997), 8–9.

49 K. Weitzmann, *The Monastery of St. Catherine at Mount Sinai: The Icons* (Princeton, 1976), pl. 4.

50 Badawy, *Coptic Art and Archaeology*, 298–99, fig. 4.86.

51 E. Kitzinger, "Stylistic Developments in Pavement Mosaics in the Near East from the Age of Constantine to the Age of Justinian," in *Colloque international sur "La mosaïque gréco-romaine"* (Paris, 1965), 347–49, repr. in idem, *The Art of Byzantium and the Medieval West: Selected Studies*, ed. W. E. Kleinbauer (Bloomington, 1976), 70–72; idem, *Byzantine Art in the Making* (Cambridge, Mass., 1977), 89–90; A. Gonosova, "The Formation and Sources of Early Byzantine Floral Semis and Diaper Patterns Reexamined," *DOP* 41 (1987): 227–37.

52 E.g., Y. Hirschfeld, "The Cave-Church at Khirbet ed-Deir," in *Ancient Churches Revealed*, ed. Y. Tsafrir (Jerusalem, 1993), 244–58, figs. on 246, 248, and 249.

53 I. Lavin, "The Hunting Mosaics of Antioch and Their Sources: A Study of Compositional Principles of Early Medieval Style," *DOP* 17 (1963): 181–86, figs. 1, 13; Gonosova, "Floral Semis



FIG. 41
San Vitale, Ravenna.
Mosaic floor (photo by
N. Teteriatnikov)

Sophia, a Justinianic diaper pattern decorates the tunnel vault beneath the northwest pier (fig. 32), and later, probably in the ninth century,⁵⁴ a similar grid was applied to the barrel vault of the west gallery.⁵⁵ The composition of the vestibule's diaper pattern with rows of small squares also occurs in a fourth-century basilica at Kourion on Cyprus,⁵⁶ in the early Byzantine floor mosaic of San Michele in Africisco at Ravenna,⁵⁷ and in a Coptic papyrus from the fifth or sixth century.⁵⁸ The eight-pointed medallions within the vestibule's

and Diaper Patterns," 227–37; *Early Christian and Byzantine Art*, ed. D. Miner (Baltimore, 1947), 131, no. 668, pl. 84; K. M. D. Dunbabin, *Mosaics of the Greek and Roman World* (Cambridge, 1999), 178, fig. 190.

54 Cormack and Hawkins, "Rooms Above" (n. 13 above), 246–47. See also Mango, *Materials* (n. 1 above), 40–43, figs. 40–41.

55 Mango, *Materials*, 40–43, figs. 40–41.

56 A. H. S. Megaw, "Basilica," in *Kourion: Excavations in the Episcopal Precinct*, ed. idem (Washington, D.C., 2007), 43, fig. 1.1.

57 I. Fiorentini Roncuzzi, "Degrado chimico-fisico nei mosaici pavimentali del 6 secolo: interventi di restauro," in *San Michele in Africisco e l'età giustiniana a Ravenna*, ed. C. Spadoni and L. Kniffitz (Milan, 2007), 311–23, figs. 1–4, pl. 26.

58 T. K. Thomas, "Silks," in *Byzantium and Islam: Age of Transition, 7th–9th Centuries*, ed. H. C. Evans (New York, 2012), 149, no. 98; A. Gonosova and N. Ševčenko, "Silk," *ODB* 3:1896–97.

diaper pattern were common in various media during the sixth and seventh centuries.⁵⁹

Checkerboard patterns like the one on the walls of the central vestibule bay, where geometric and floral motifs alternate (fig. 26), were widely used during the early Byzantine period, especially in mosaic floors and textiles.⁶⁰ The carpet pattern with alternating lozenges and smaller medallions on the walls of the north and south bays (figs. 24–25) occurs elsewhere, for example in floor mosaics of the baptistery beside the martyrium at Antioch,⁶¹ in the vault mosaics of St. George's rotunda at Thessalonike,⁶² on the Justinianic mosaic column

59 N. Teteriatnikov, *The Sixth-Century Mosaics of St. Sophia*, forthcoming.

60 For examples of patterns in textiles see Thomas, "Silks," 149–51 (A–C). For similar patterns on mosaic floors at Madaba, at the Church of the Lions, at St. Menas, and at St. Basil, see M. Piccirillo, *The Mosaics of Jordan* (Amman, 1973), 49, figs. 53–54; 372–73, 376, 594, figs. 626, 633; K. C. Britt, "These Stones Still Speak: The Progress of Research on Late Roman and Early Byzantine Mosaic Pavements in the Eastern Mediterranean," *Journal of Art Historiography* 5 (2011): 1–41, esp. 13–15.

61 J. Lassus, *Sanctuaires chrétiens de Syrie* (Paris, 1947), pl. 39, fig. 3. For other examples see Anderson, "Ornamental Tiles" (n. 37 above), 105.

62 N. Papahadjis, *Monuments of Thessalonike* (Thessalonike, 1968), 54–55; C. Bakirtzis and E. Kourkoutidou-Nikolaïdou, "Rotunda," in



FIG. 42 Hagia Irene, Istanbul. South aisle, central section (photo by W. Schiele 1969, courtesy of Deutsches Archäologisches Institut, Istanbul, RD00003)

above the apse of St. Catherine on Mount Sinai,⁶³ and in frescoes of the Red Monastery at Sohag.⁶⁴

The medallions with radiating crosses in the center of the west and the east walls (figs. 21 and 27) are closely comparable with Justinianic medallion crosses

in fresco on the vault of the southwest ramp.⁶⁵ Similar radiating crosses in blue medallions are also found in a barrel vault mosaic of the monastery church near Kartmin,⁶⁶ in early Byzantine soffit mosaics in the Acheiropoietos basilica at Thessalonike,⁶⁷ and in contemporary frescoes from a necropolis outside the same

Mosaics of Thessaloniki: 4th–14th Century, ed. C. Bakirtzis (Athens, 2012), 120–21.

63 G. H. Forsyth and K. Weitzmann, *The Monastery of St. Catherine at Mount Sinai: The Church and Fortress of Justinian* (Ann Arbor, 1973), pls. 129 (A), 137.

64 Bolman, “Late Antique Aesthetics, Chromophobia, and the Red Monastery, Sohag, Egypt,” esp. 14–15, pl. 9.

65 Cormack and Hawkins, “Rooms Above” (n. 13 above), fig. 8.

66 Hawkins and Mundell, “Mosaics” (n. 43 above), 285–87, figs. 7, 18–19.

67 E. Kourkoutidou-Nikolaïdou, “Acheiropoietos,” in *Mosaics of Thessaloniki*, 213, 218, 223, 232–34; Furlas, *Acheiropoietos* (n. 18 above), 103, figs. 67, 73, 74, 137, 211.



FIG. 43 Archbishop's Chapel, Ravenna. Vestibule, barrel vault, detail (photo by N. Teteriatnikov)

city.⁶⁸ Later, the same type of cross reappears in the Iconoclast mosaics of the room over the southwest ramp of Hagia Sophia and in the neighboring alcove of the patriarchal palace, the mosaic decoration of which dates from around 870.⁶⁹ Frescoes in the south aisle of Hagia Irene contain medallion crosses from

68 E. Marke, *Η νεκρόπολη της Θεσσαλονίκης στους υστερορωμαϊκούς και παλαιοχριστιανικούς χρόνους: Μέσα του 3ου έως μέσα του 8ου αι. μ.Χ.*, *Demosieumata tou Archaiologikou Deltiou* 95 (Athens, 2006), 191–93, 230, cat. 100–101, drawing 154–55, pls. 25a, 67b.

69 Cormack and Hawkins, “Rooms Above” (n. 13 above) 234–37, figs. 24–25.

the reconstruction of the church by Constantine V ca. 753 (fig. 42).⁷⁰

In conclusion, the ornamental repertoire of the vestibule mosaics was either derived from the decoration of the Justinianic church or available in contemporary monuments from the early Byzantine period. Among the latter, textiles or depictions of textiles are particularly prominent. Luxury textiles were imported

70 Peschlow, *Irenenkirche* (n. 9 above), 213; T. Velmans, “La pittura bizantina: mosaici, affreschi, icone, miniature,” in *Bizanzio, Costantinopoli, Istanbul*, ed. eadem (Milan, 2008), 219–20, fig. 161.

from Egypt, Persia, and China⁷¹ and used not only for garments, but for church hangings, altar cloths, relic wrappings, etc.,⁷² which may have inspired the use of similar patterns on the walls and vault of the vestibule. In particular, the complete covering of the walls and vault with rich carpetlike patterns set against a white marble background distinguished the south vestibule mosaics from the Justinianic mosaics of the narthex and may go back to the example of textiles.⁷³ The barrel vault of the Archbishop's chapel at Ravenna was decorated with a similarly rich carpet pattern mosaic, dates to the early sixth century, and suggests that such vault mosaics were more common during the early Byzantine period (fig. 43).⁷⁴

Overview and Chronology of Materials and Technique

In order to confirm the stylistic dating of the mosaics of the south vestibule, we shall compare the technique and materials used in them with those used in mosaics elsewhere in Hagia Sophia and in other churches of the early and middle Byzantine periods. Our knowledge of the materials and techniques used in the vestibule mosaics relies largely on the information obtained in the 1930s by the Byzantine Institute conservators, who

71 M. Rostovcev, "Stekliannya rosposnyja pozdneellinisticheskogo vremeni i istorija dekorativnoi zivoposi," *Izvestia Imperatorskogo archeologicheskoi Komissii* 54 (1914): 17–22; Hawkins and Mango, "Church Fathers" (n. 25 above), 32–37; J. Trilling, *The Roman Heritage: Textiles from Egypt and the Eastern Mediterranean, 300 to 600 A. D.* (Washington, D.C., 1982); idem, *The Medallion Style: A Study in the Origin of Byzantine Taste* (New York, 1985); idem, *Ornament: A Modern Perspective* (Seattle, 2003); Gonosova, "Floral Semis and Diaper Patterns" (n. 51 above), 227–37; Gonosova and Ševčenko, "Silk" (n. 58 above), 1893–97; A. Gonosova, "Exotic Taste: The Lure of Sasanian Persia," in *Late Antique and Medieval Art of the Mediterranean World*, ed. E. R. Hoffman (Malden, Mass., 2007), 40–46; M. P. Canepa, *The Two Eyes of the Earth: Art and Ritual of Kingship between Rome and Sasanian Iran* (Berkeley, 2009); T. K. Thomas, "'Ornaments of Excellence from the Miserable Gains of Commerce': Luxury Art and Byzantine Culture," in *Age of Transition*, 124–33; eadem, "Silks" (n. 58 above), 149, no. 98.

72 Thomas, "Ornaments of Excellence," 129.

73 For other examples of early Byzantine mosaic patterns that may have been inspired by textiles see C. Rizzardi, "Motivi sassanidi nell'arte di Ravenna del 5 e 6 secolo," *CorsiRav* 38 (1991): 367–85, esp. 369–71; A. Stauffer, *Antike Musterblätter: Wirkkartons aus dem spätantiken und frühbyzantinischen Ägypten*, Spätantike, frühes Christentum, Byzanz, Reihe A, Grundlagen und Monumente 15 (Wiesbaden, 2008), 65–66.

74 G. Mackie, *Early Christian Chapels in the West: Decoration, Function, and Patronage* (Toronto, 2003), 104–15, with bibliography.

recorded observations in field notebooks and collected samples of plaster and tesserae. The following summarizes their data on the plaster, the preparatory drawings, the tesserae, and their setting.

PLASTER

Due to considerable damage and loss of tesserae, large areas of plaster were exposed over the years. During replacement or consolidation of loose tesserae, the conservators had the opportunity to study the plaster from scaffoldings at close quarters. According to their records, the plaster consists of three layers. The total thickness of the plaster on the walls and main vaults varies from 5.2 to 5.6 centimeters due to their uneven surfaces.⁷⁵ In the barrel vault above the north lunette the average thickness is 5.4 centimeters.

The first layer of plaster, applied directly on the brick, consists mostly of brick dust mixed with fine sand; the conservators noted no binding materials.⁷⁶ Three samples of the first layer of plaster were taken from the main vault and from the north lunette. The first sample, from the west side of the main vault, consists of brick dust, sand, and probably lime, which would explain the light color (fig. 44). Lime acted as a binding material and protector against moisture.⁷⁷ The other two samples were taken from the north lunette, one from the upper part and one from the lower. The upper sample has a strong brick red color (fig. 45). The lower sample is similar, but lighter in color, probably because more lime was added. Thus two differently composed plasters were used in the same panel. No straw was used, but the color of both samples from

75 W. J. Gregory, "Observation Book II," 24 September–20 November, 1934, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-073; R. A. Gregory, "Notes Taken While Working on the Vestibule Panel and General Notes of Work in Narthex and Barrel Vaulting," 1933, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-041. A similar thickness, between 4 cm and 5 cm, is recorded for other Byzantine mosaics: E. J. W. Hawkins and D. Mouriki, "Technique," in *The Mosaics of Nea Moni on Chios*, D. Mouriki (Athens, 1985), 95; R. Cormack, "Wall-Paintings and Mosaics," in *OHBS*, 389.

76 R. A. Gregory, "General Notes of Work in the Narthex and Barrel Vaulting," 24 and 25 October; 2 November; 4–6 November, 1933, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-042.

77 T. Organ and R. Ozil, "The Conservation of the Mosaics in the Dome of Hagia Sophia, 1992–2002," in *Mosaics of Anatolia*, ed. G. Sözen (Istanbul, 2011), 245–56, esp. 249.



FIG. 44 South vestibule, main vault, brick dust from the first layer of plaster (photo courtesy of Byzantine Institute of America, Dumbarton Oaks, Byzantine Collection, Washington, D.C., BZ.1985.8.1)



FIG. 46 South vestibule, main vault, sample from the rendering bed (photo courtesy of Byzantine Institute of America, Dumbarton Oaks, Byzantine Collection, Washington, D.C., BZ.1985.8.2)

the north lunette is darker than that of the lowermost plaster from the main vault.

The second layer of plaster—the rendering bed—is similar in the walls and main vault as well as in the barrel vault above the north lunette (figs. 46–47). It has a light, off-white color and contains chopped straw and a large amount of sedge or grassy plant admixture. Some of the pieces of sedge are as long as 1.5 centimeters. The sedge from the north lunette panel is larger than in the plaster of the walls and main vault. Like straw, sedge was used to absorb moisture and strengthen the plaster.



FIG. 45 South vestibule, figural mosaic in the north lunette, brick dust from the first layer of plaster (photo courtesy of Byzantine Institute of America, Dumbarton Oaks, Byzantine Collection, Washington, D.C., BZ. 1985.8.6)



FIG. 47 South vestibule, figural mosaic in the north lunette, sample from the rendering bed (photo courtesy of Byzantine Institute of America, Dumbarton Oaks, Byzantine Collection, Washington, D.C., BZ.1985.8.9)

The third and final layer—the setting bed—is represented by a few pieces from the lower corner of the lunette panel and from the main vault. The plaster is composed of fine lime and marble dust, which made for a strong composition. The conservators pointed out that this layer is so hard that it was difficult to drill holes into it for installing metal clamps. This suggests

that the setting bed helped to protect the lower layers of plaster and the mosaics from moisture.

The three layers of plaster beneath the mosaics of the south vestibule are a common feature of Byzantine mosaics in Hagia Sophia and elsewhere.⁷⁸ The thickness of the plaster also presents no anomaly. The difference in average thickness of plaster between the walls and main vault on the one hand and the barrel vault above the north lunette on the other is negligible and can be explained sufficiently by the uneven wall surface. A similar thickness of plaster was recorded during the conservation of the western segment of the dome. In this tenth-century work, an average thickness of 5 centimeters was observed, and the plaster of the sixth-century dome is of similar thickness.⁷⁹

However, a considerable difference has been noted in the composition of various samples of plaster from the first layer. Those from the north lunette have a strong brick color (fig. 45) not found in the samples from the main vault (fig. 44). The lighter color of the latter resembles samples from the narthex.⁸⁰ No straw or sedge was found in any samples of the bottom layer of plaster in the vestibule. Sedge is also absent in the first layer beneath the sixth-century mosaics in the narthex and the ninth-century mosaics in the apse. In contrast, the ninth-century mosaics of the north tympanum contain a large amount of straw in the first layer

of plaster.⁸¹ In the mosaics above the southwest ramp, which formed part of the patriarchal palace, sedge was probably used in all three layers of plaster.⁸² Straw is often present in the composition of the first layer of plaster in middle Byzantine mosaics.⁸³

The second layer of plaster—the rendering bed—contains a large amount of sedge meant to strengthen the plaster and counterbalance the high humidity resulting from the surrounding waters of the Bosphorus, the Golden Horn, and the Black Sea (figs. 46–47).⁸⁴ Cisterns below the floor of Hagia Sophia release additional moisture.⁸⁵ The sedge would have absorbed this excess moisture and strengthened the cohesion of the plaster. Thus the second layer of plaster would protect the first layer from deterioration.

The difference between the second layer of plaster on the walls and main vault, and on the north lunette and its barrel vault is small, but significant. The samples from the walls and main vault show smaller pieces of sedge than those from the north lunette (cf. figs. 46–47). Sedge of smaller size is also present in the rendering bed of the Justinianic mosaics in the narthex and seems to be characteristic of an earlier period.⁸⁶ Larger pieces of sedge also occur in samples of the rendering bed from the middle Byzantine barrel vaults of the south gallery,⁸⁷ and these are closer in size to the pieces of sedge in the rendering bed of the north lunette of the vestibule.

PREPARATORY DRAWINGS

Preparatory drawings were found on the two upper layers of plaster, the rendering bed, and the setting bed. They were made in fresco and served to control the overall mosaic design and to allow artisans to work

78 T. Whittemore, *The Mosaics of St. Sophia in Istanbul: Preliminary Report on the First Year of Work, 1931–1932; The Mosaics of the Narthex* (Paris, 1933), 9–10; G. Holt, “A Casting Method for Reproducing Mosaics,” *Technical Studies* 7, no. 4 (1939): 181. On plaster application in Byzantine mosaics see P. A. Underwood, *The Kariye Djami*, vol. 1 (New York, 1966), 176–77; E. Kitzinger, “Mosaic Technique,” *Encyclopedia of World Art* (New York, 1972), 10:325–27; Hawkins and Mango, “Church Fathers” (n. 25 above), 17; I. Andreescu, “Torcello III: La Chronologie relative des mosaïques pariétales,” *DOP* 30 (1976): 245–341, esp. 252; Hawkins and Mouriki, “Technique,” 94–95; Cormack, “Wall-Paintings and Mosaics,” 389; R. Ozil, “The Conservation of the Mosaics of Hagia Sophia,” in *Light on Top of the Black Hill: Studies Presented to Halet Çambel*, ed. G. Arsebük et al. (Istanbul, 1998), 543–53, esp. 545 fig. 2; Organ and Ozil, “Conservation” (n. 77 above), 245–56.

79 The dome of Hagia Sophia was part of a restoration campaign undertaken by the Turkish Ministry of Culture and UNESCO in 1992 and 2002: Ozil, “Conservation,” 545 fig. 2; Organ and Ozil, “Conservation,” 249. For the thickness of plaster in other Byzantine mosaics see n. 75 above.

80 For example the samples of brick dust in the Dumbarton Oaks Museum and Collection: BZ.1985.8.21, BZ.1985.8.24, BZ.1985.8.30, BZ.1985.8.31, BZ.1985.8.48, BZ.1985.8.49.

81 E. J. W. Hawkins and C. Mango, “The Apse Mosaics of St. Sophia at Istanbul: Report on Work Carried Out in 1964,” *DOP* 19 (1965): 115–48, esp. 124.

82 Cormack and Hawkins, “Rooms Above” (n. 13 above), esp. 213.

83 Hawkins and Mouriki, “Technique” (n. 75 above), 95.

84 Large pieces of sedge are also present in samples from the Deesis mosaic in the south gallery of Hagia Sophia, such as Dumbarton Oaks Museum BZ.1985.8.89.

85 C. Özkan Aygün, “New Findings on Hagia Sophia Subterranean and Its Surroundings,” *Bizantinistica* 12 (2010): 57–78.

86 For example the plaster samples from the narthex vault of Hagia Sophia in the Dumbarton Oaks Museum, BZ.1985.8.25, BZ.1985.8.22, and BZ.1985.8.23.

87 For example the samples in the Dumbarton Oaks Museum BZ.1985.8.60.

simultaneously on different sections of the mosaics. Such fresco paint is visible on small fragments of plaster from the main vault and on a larger fragment from the lunette panel. The latter was taken from the lower section and has a very dark, almost brown coloration on top.

According to the conservators' notes, the setting bed of the main vault received detailed preparatory frescoes in the following colors: yellow ocher beneath the gold tesserae; blue beneath the red glass tesserae; green beneath the green glass tesserae; there was no paint beneath the white marble cubes.⁸⁸ The tesserae samples from the area of the main vault show that the red tesserae have very dark red, almost dark brown, paint on the bottom, suggesting this color may also have been used under some of the red tesserae.

No color was found on the setting bed beneath the white marble cubes used for the background on the walls and main vault and in the barrel vault above the lunette mosaic, probably because marble's porosity makes it easily discolored.⁸⁹ The sutures of the setting bed between the tesserae remained exposed. Since the setting bed is white, it blended in well with the white marble tesserae.

The colors of the preparatory drawings of the vestibule walls and main vault may be compared with those of the middle Byzantine mosaics of the central dome of Hagia Sophia. Conservators found that "the preparatory fresco paint of the bedding mortar in the tenth-century dome segment is more complex."⁹⁰ According to them, the following color palette was used: red ocher for areas of red tesserae; a light green or white for green tesserae; black for blue tesserae; ocher for gold tesserae; and light greyish or white for silver tesserae.⁹¹ Although information on the colors of the preparatory drawings of the walls and main vault of the south vestibule is limited, some similarities may be observed. For example, green is used beneath green

tesserae, and dark red or brown is used beneath red tesserae (?), though blue is used as well.

The use of yellow under gold tesserae in the vestibule mosaics stands apart from the sixth-century mosaics of the main church, where red paint was used under gold, for example between the windows of the apse.⁹² Red paint was used beneath gold in mosaics of the sixth-century segment of the dome,⁹³ and yellow was used in mosaics of the tenth-century segment. Indeed yellow paint under gold tesserae is largely found in the ninth- and tenth-century mosaics of Hagia Sophia.⁹⁴ However, yellow ocher used as underpaint for the gold tesserae was found on the vertical surfaces of the arch reveal in the north and south tympana, which date to 532–37 or 558–63, so there is a sixth-century example.⁹⁵

TESSERAE

The mosaics were executed in metallic tesserae, glass tesserae, and natural stones (figs. 48 and 49). The metallic tesserae include gold and silver used sparingly as highlights, for example to distinguish the crosses in the central medallions (fig. 27) or to accent the small lozenges that outline the structure of the vault (figs. 22–23). Samples taken from the main vault are small square cubes, regular in size (fig. 48). They measure $6.5 \times 7 \times 7$ millimeters, and the glass is brown or amber-colored. The top layer of gold has a warm tone, but the silver sample has dark borders from corrosion due to pollution and moisture. One gold tessera is different from the others; it measures $5 \times 8 \times 4$ millimeters, the gold has a lighter, lemony color, and the glass is clear.

The gold and silver tesserae were made using the same basic sandwich technique found throughout Byzantine mosaics. A piece of gold or silver leaf was laid out on a glass panel and covered with a thin layer of glass powder, after which the entire panel was heated in a furnace and then cut into small cubes.⁹⁶ Similar brown or amber-colored but smaller gold tesserae (average 6 millimeters) were found in the sixth-century

88 W. J. Gregory, "Observation Book II," 10 October 1934, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-073, 10–11.

89 Ibid.

90 Ozil, "Conservation" (n. 78 above), 545, fig. 2; Organ and Ozil, "Conservation" (n. 77 above), 245–56. For the thickness of plaster in Byzantine churches see n. 74; Hawkins and Mouriki, "Technique" (n. 75 above), 95.

91 See previous note.

92 Hawkins and Mango, "Apse Mosaics" (n. 81 above), 135–36.

93 Ozil, "Conservation," 545; Organ and Ozil, "Conservation," 249.

94 Hawkins and Mango, "Church Fathers" (n. 25 above), 8, 37.

95 Ibid., 8; Organ and Ozil, "Conservation" (n. 77 above), 249–50.

96 Theophilus, *The Various Arts: De Diversis Artibus*, ed. C. R. Dodwell (Oxford, 1986), 45; M. Farneti, *Technical-Historical Glossary of Mosaic Art* (Ravenna, 1993), 71.



FIG. 48 South vestibule, main vault, tesserae (photo courtesy of Byzantine Institute of America, Dumbarton Oaks, Byzantine Collection, Washington, D.C., BZ.1985.8.4)



FIG. 49 South vestibule, barrel vault above the north lunette, tesserae (photo courtesy of Byzantine Institute of America, Dumbarton Oaks, Byzantine Collection, Washington, D.C., BZ.1985.8.14)

mosaics of the narthex.⁹⁷ The same brown or amber glass color in silver samples from the vestibule is also suggestive of an early Byzantine date. The single gold tessera with a lighter lemony color from the vaults of the vestibule⁹⁸ is similar to ones found in the tenth-century dome and identified as tenth-century

tesserae.⁹⁹ The presence of this tessera among the earlier group may be explained by a later renovation of the original vestibule mosaics, most likely when the north lunette and barrel vault were built and decorated.

Opaque glass tesserae of various colors were employed primarily for the ornamental patterns and

97 Dumbarton Oaks Museum and Collection BZ.1985.8.41.

98 Dumbarton Oaks Museum and Collection BZ.1985.8.4.

99 Ozil, "Conservation" (n. 78 above), 545, fig. 2; Organ and Ozil, "Conservation" (n. 77 above), 248–50.

form the largest group. The repertory comprises clear glass, deep blue and grey-blue, deep red, light and darker green, and yellow-green. The shapes of the tesserae are varied and include squares, rectangles, and triangles (figs. 48–49). The latter were made to fit in odd-shaped areas.

Some of the cubes contain little bubbles. According to the conservators of the Byzantine Institute, “opaque glass produced between the sixth and tenth centuries, as found, for instance, in the narthex and the vestibule, contains innumerable air holes resembling those in natural obsidian. This is true of all colors but especially blue and, exceptionally, green. [. . .] Such air bubbles are infrequent in the glass of the eleventh and twelfth century portrait panels of the south gallery.”¹⁰⁰ Samples of opaque tesserae with air holes, such as those colored grey-blue, are similar to samples from the sixth-century mosaics in the narthex, although the cubes from the vestibule tend to have somewhat more subdued colors.

Though the opaque tesserae in the ninth- and tenth-century mosaics of the apse, the tympana, and the galleries are usually larger in size,¹⁰¹ those used in the barrel vault are similar to those used earlier on the walls and, as the conservators of the Byzantine Institute suggested, they were likely reused. These cubes would have become available in places where the barrel vault hides parts of the walls that were originally clad in mosaic. Glass tesserae were expensive, and their reuse was a common practice in the Byzantine period.¹⁰² The ornamental mosaics from the ninth and tenth century commonly replace glass with stone, slate, and terracotta,¹⁰³ though terracotta is not found on the wall and main vault of the vestibule. The predominant use of glass is a strong indication of an earlier date, closer to that of the Justinianic mosaics, which used glass exclusively.

100 “The Technical Process 1. Technique of the Byzantine Mosaics in Hagia Sophia; Final Draft, The Technical Process 1. Technique of the Byzantine Mosaics in St. Sophia 2. Technique of Uncovering and Consolidation,” ICFA, Dumbarton Oaks, MS.BZ.004-02-02-02-3185.

101 For example the samples in Dumbarton Oaks Museum BZ.1985.8.50, BZ.1985.8.82, BZ.1985.8.97, BZ.1985.8.163.

102 L. James, “Byzantine Glass Mosaic Tesserae: Some Material Considerations,” *BMGS* 30 (2006): 29–47, esp. 39.

103 For materials used in the ninth- and tenth-century mosaics see Hawkins and Mango, “Church Fathers” (n. 25 above), 8.

Large amounts of natural stone and marble tesserae are also found in the vestibule mosaics.¹⁰⁴ White marble tesserae were used especially for the background of the walls and the main vault and for the barrel vault above the lunette panel. Originally, the white background, which is non-reflective, would have made the glass ornaments stand out well, but the marble gradually absorbed pollution and dust and had turned grey by the time of the Fossati brothers, who restored it with a layer of light grey color. Nevertheless, the conservators of the Byzantine Institute found that the marble employed on the walls and main vaults was less white than the marble in the barrel vault, suggesting the latter was a different type of marble and not reused. Perhaps the marble tesserae were discarded because they had already turned grey.

In general, the white marble cubes are larger than the glass cubes (fig. 21). Two samples from the Dumbarton Oaks Byzantine Collection measure 6.5 × 12 × 7 millimeters and 7 × 10 × 8 millimeters. The marble cubes also have slightly concave sides that allow a firmer grip on the plaster. This was necessary not only because of their large size and corresponding weight, but because the spacing between the white cubes is wider and therefore less firm than that used in the glass tesserae settings. This served to enhance the contrast between the ornament and the background.

The large number of white marble tesserae used for the background of the walls and the main vault and in the barrel vault above the lunette panel is a distinctive feature of the vestibule mosaics. In contrast, the sixth-century mosaics of the narthex and the nave were made primarily of gold glass.¹⁰⁵ Marble was more readily available and cheaper than gold and silver glass.¹⁰⁶

White marble was used as a background material in the middle Byzantine mosaics in the tympana, the gallery, and the vaults of Hagia Sophia¹⁰⁷ as well as in other monuments of the same period.¹⁰⁸ However its use was known before this. The earliest dated example

104 W. J. Gregory, “Observation Book I,” 22 April–8 August 1934, ICFA, Dumbarton Oaks, MS.BZ.004-02-01-02-072.

105 Hawkins and Mango, “Apse Mosaics” (n. 81 above), 132; Hawkins and Mango, “Church Fathers” (n. 25 above), 21; Organ and Ozil, “Conservation” (n. 77 above), 248–49.

106 James, “Byzantine Glass Mosaic Tesserae,” 45–46.

107 Hawkins and Mango, “Church Fathers” (n. 25 above), 21.

108 Hawkins and Mouriki, “Technique” (n. 75 above), 101–2.

of the use of alternative background materials in Hagia Sophia is recorded for the mosaics of the room over the southwest ramp, where limestone is employed instead of gold or silver.¹⁰⁹ The room has been identified as part of the patriarchal palace, and the mosaics should date from its erection between 565 and 577.¹¹⁰ When they were restored in 768/69, limestone was again used in the background. In contrast, mosaics in a neighboring “alcove room” employ slate and probably date to a renovation around 870.¹¹¹ Another early example of white marble from Constantinople is the border of the sixth-century mosaic depicting the Presentation of Christ in the Temple from the Kalenderhane complex.¹¹² Its border is made of larger and more widely spaced tesserae similar to the marble tesserae in the south vestibule.

SETTING THE TESSERAE

The fieldwork notebooks contain information on several methods used to press the tesserae into the plaster. Some tesserae are not fully embedded in the setting bed, for example the cubes that form the crosses on the east and west walls. Here the tesserae protrude almost half their width above the setting bed and cast shadows in the lateral light from the south window. This makes the crosses stand out sharply on the otherwise uniformly illuminated wall surfaces and catch the passing viewer’s eye. This technique also causes instability and loss of tesserae.

In most cases where gold or silver was used, the tesserae were set at an angle to intensify their sparkling effect. This technique is employed consistently for the setting of metallic tesserae in the ornamental patterns. Moreover, gold tesserae are sometimes set in horizontal rows, especially in smaller background areas. The medallions with maple leaves on the transversal arches (fig. 13), for example, contain a background of horizontal rows of gold tesserae set at an angle; this orientation

is juxtaposed to that of the maple leaves, emphasizing on the latter.

The diverse ways in which the tesserae were applied to the walls and main vault and to the north barrel vault confirm the different dates of these mosaics. On the walls and in the main vault the glass tesserae are set closer to each other and therefore are more densely packed, giving the ornament a sharper appearance. This has parallels in the Justinianic mosaics of the main church.¹¹³ In the north barrel vault, on the other hand, the tesserae are set wider and the spacing is uneven. The same is observed in the ninth- and tenth-century mosaics of the apse, the tympana, and the galleries.¹¹⁴

The setting of golden tesserae in horizontal rows at an angle, for example in the medallions on the transversal arches (fig. 13), was common throughout the Byzantine period. The technique had already been employed in the sixth-century lunettes of the narthex.¹¹⁵ It is also attested in lunettes in the naos of a monastery church near Kartmin in North Mesopotamia, dated to ca. 512,¹¹⁶ as well as in various other sixth-century mosaics throughout the Byzantine Empire.¹¹⁷ In Hagia Sophia, a continuous practice of this technique is evident in a number of middle Byzantine mosaics, such as the lunette mosaic of the emperor before Christ, the mosaic of the emperor Alexander in the north gallery, and the mosaic of the emperors Constantine and Justinian before the enthroned Virgin and Child in the south vestibule.¹¹⁸

Other techniques such as setting of the tesserae high above the setting bed are also observed in both early Byzantine and middle Byzantine mosaics. One early example is found in the above-mentioned mosaics of the lunette in the church near Kartmin. A similarly high setting of the tesserae is recorded also at the church of St. Michael at Germia in Galatia, where the mosaics date from the middle Byzantine period.¹¹⁹

109 Cormack and Hawkins, “Rooms Above” (n. 13 above), 191, 201.

110 Ibid., 201.

111 Ibid., 233–35.

112 Y. D. Kuban and C. L. Striker, “Work at Kalenderhane Camii: Third and Fourth Preliminary Reports,” *DOP* 25 (1971): 255–57, fig. 11; H. Maguire, “The Iconography of Symeon with the Christ Child in Byzantine Art,” *DOP* 34 (1980): 261–64; *Kalenderhane in Istanbul: The Buildings, Their History, Architecture and Decoration: Final Reports on the Archaeological Exploration and Restoration at Kalenderhane Camii 1966–1978*, ed. Y. D. Kuban and C. L. Striker (Mainz, 1997), 121, pls. 148–49.

113 For sixth-century mosaics of the tympana see Hawkins and Mango, “Church Fathers” (n. 25 above), 21–23.

114 Hawkins and Underwood, “Emperor Alexander” (n. 42 above), 188–215, esp. 204.

115 Whittemore, *Narthex* (n. 78 above), pl. 9.

116 Hawkins and Mundell, “Mosaics” (n. 43 above), 279–96, fig. 33 pl. A.

117 Fourlas, *Acheiropoietos* (n. 18 above), 366.

118 Teteriatnikov, *Sixth-Century Mosaics*, forthcoming.

119 P. Niewöhner, “Bronze Age Hüyük, Iron Age Hilltop Forts, Roman Poleis, and Byzantine Pilgrimage in Germia and Its Vicinity: ‘Connectivity’ and a Lack of ‘Definite Places’ on the Central

Overall Chronology of the Vestibule Mosaics

The materials, techniques, and quality of execution suggest that the mosaics of the vestibule belong to two different phases. The first phase comprises the walls and main vault. In this phase the first layer of plaster is light in color and compares to that of the sixth-century mosaics of the main church. The admixture of smaller sedge in the second layer of plaster is similar to that in the Justinianic mosaics of the narthex. The yellow preparatory paint on the setting bed, however, is different from that in the original Justinianic mosaics, where red underpainting is observed. Nevertheless, yellow ocher underpaint on a setting bed for the gold tesserae was already in use in the smaller mosaics in the tympana dating to 532–37 or 558–63.

The majority of gold glass samples in the tesserae of these vaults share similarities with those in the early Byzantine narthex. Like the Justinianic mosaics, the ornamental mosaics of the vestibule are executed mainly in glass and without the large number of stones and terracotta tesserae that characterize the ornamental mosaics of the ninth and tenth centuries. The marble background has a first Constantinopolitan parallel already in the sixth-century mosaic from the Kalenderhane complex. Overall, the mosaics on the walls and main vault of the vestibule are uniformly executed to the same high standard and can be attributed to the same phase. Since the conservators of the Byzantine Institute recorded no traces of redecoration on the walls and main vault, we can assume that the mosaics from the original decoration were executed more or less immediately after the vestibule had been constructed.

The mosaics of the north barrel vault, on the other hand, must belong to a different, second phase. They imitate the main vault, but the glass tesserae are set less closely, the geometric patterns are simplified, and the overall quality of workmanship is lower. Since the barrel vault was apparently constructed as a visual backdrop for the figurative mosaic in the lunette, it should date from the same time, most probably the period from 985 to 989, when Hagia Sophia was closed for repairs after an earthquake.¹²⁰

Anatolian High Plateau,” *Anatolian Studies* 63 (2013): 97–136, 129 fig. 60.

120 On the dating of the mosaic lunette see Whittemore, *Vestibule* (n. 1 above), 30–31, pls. 4–5.

History and Function of the Vestibule

The vestibule had various functions that changed over time. First and foremost it was meant to provide a sheltered passage between the narthex and the rooms south of the atrium on the one hand and the southwest ramp on the other (fig. 5). The narthex and the rooms south of the atrium had an alternative connection via the atrium (discussed below), but the southwest ramp and the galleries could be reached only via the outside until the passage was roofed by the vestibule. Considering the long, cold, and wet winters on the shore of the Bosphorus, this was a serious deficit of the original Justinianic plan, especially if a group of people wanted to access the relatively narrow and steep ramp at the same time. This would have occurred frequently in one of the largest and busiest churches of the empire, and any procession would invariably have slowed down and come to a halt outside the door to the ramp, a great inconvenience in view of the frequent strong rainfall.

The need for shelter is borne out by the north vestibule, which covers the northern access from the narthex to the galleries via the northwest ramp. As the latter was apparently erected as part of the Justinianic building, the initial lack of roofing in the area of the south vestibule should have had a special reason; it is not only impractical, but it upsets the symmetry of the original plan both from outside and from inside the narthex, which has a southern, but no northern window. The open space that later became the south vestibule may initially have had another special function, but the whole area was reconfigured with the building of the patriarchate.¹²¹

A second function of the south vestibule, as evidenced by its extraordinary height, was to support an upper story on the level of the galleries (fig. 6). The overriding importance of this second story is made clear by the sumptuous mosaic decoration. Through references in written sources it can be identified with the Great Sekreton of the patriarchal palace,¹²² built after a fire

121 R. Guiland, “Le Thomaïtès et le Patriarcat,” *JÖB* 5 (1956): 27–40, repr. in idem, *Études de topographie de Constantinople byzantine*, BBA 37 (Berlin, 1969), 2:14–27; R. Janin, “Le palais patriarchal de Constantinople,” *REB* 20 (1962): 131–55; A. Pasadaïou, *Ο πατριαρχικός οίκος του Οικουμενικού θρόνου*, Hidryma Meletōn Chersonēsou tou Haimou 157 (Thessalonike, 1976), 40–75.

122 C. Mango, *The Brazen House: A Study of the Vestibule of the Imperial Palace of Constantinople*, Arkæologisk-kunsthistoriske

along the south side of Hagia Sophia by Patriarch John III Scholastikos (565–577).¹²³ That the rooms south of the atrium were once part of a larger building complex is still apparent from broken arches on their south side and on the west side of the three chambers to the south of the vestibule.¹²⁴ The Sekreton was apparently in use by 574, when John Scholastikos held court there during the persecution of Monophysite bishops.¹²⁵ Since the vestibule supported the Sekreton, it must have been built between 565 and 574.

The connection with the patriarchal palace may also explain other special features and hence a third function of the vestibule as the main entrance of the patriarchate. The entrance was probably effected

meddelelser vol. 4, no. 4 (Copenhagen, 1959), 53; Cormack and Hawkins, “Rooms Above” (n. 13 above), 175–251. This identification has been called into question because on the Feast of the Exaltation of the Cross, patriarch and emperor first conducted preliminaries in the south gallery, then venerated the relics of the True Cross in the Small Sekreton, and only afterward entered the Great Sekreton, where a candlelit procession was formed in order to parade the relics into the nave and onto the ambo (*Book of Ceremonies* 1.31 [22]: Constantine VII Porphyrogenitus, *Le livre des cérémonies*, ed. A. Vogt [Paris, 1935–40]): Dark and Kostenec, “Patriarchate” (n. 8 above), 129; E. Russo, “Le sculture architettoniche dei cosiddetti sekreta grande e piccolo di S. Sofia di Costantinopoli,” *Bizantinistica* 11 (2009): 33–45, esp. 36–37. Dark, Kostenec, and Russo argue that the room above the vestibule should not be the Great Sekreton because the room is directly connected to the south gallery and does not allow for a detour through the Small Sekreton, which Mango, Cormack, and Hawkins locate in the neighboring room above the southwest ramp. Mango, Cormack, and Hawkins may still be right, though, because the *Book of Ceremonies* does not list every step of the procession, but only the stations, and it makes sense that the first station after leaving the gallery (and passing through the Great Sekreton) should have been in the Small Sekreton, where some veneration was indicated before picking up the relics. When the way out of the Small Sekreton and into the nave again led through the Great Sekreton, this was mentioned because the candlelit procession needed to be formed there, which would have thus constituted a station.

123 John of Ephesus, *Ecclesiastical History* 2:26, 27, 34. Cf. Mango, *Brazen House*, 52. Russo, “Le sculture architettoniche,” 33–45, and idem, *Le decorazioni di Isidoro*, 117–30, confirms a date in the second half of the sixth century for the architectural sculpture of the rooms above the vestibule and the southwest ramp, adding that this date may be narrowed down to the late Justinianic period, but this remains conjecture.

124 Dark and Kostenec, “Patriarchate” (n. 8 above), 120–23; eidem, “Paul the Silentiary’s Description” (n. 5 above), 89–94, fig. 1 plan 1.

125 John of Ephesus, *Ecclesiastical History* 2:36. Cf. Cormack and Hawkins, “Rooms Above” (n. 13 above), 202.

through the doorway to the rooms south of the atrium. As opposed to the door to the southwest ramp, which was small, unprepossessing, and vaguely placed somewhere along the east wall of the vestibule, the doorway to the rooms south of the atrium was a major feature. It was large, occupied the center of the west wall underneath the central groin vault, and would have gained additional prominence by the flight of stairs that must have been contained in the small intermediate chamber and that led to the higher ground level of the rooms south of the atrium.

The intermediate chamber is wider than the doorways from the vestibule to the rooms south of the atrium, and the lateral parts of the chamber can be described as niches that flank the passage. The southern niche is shallow, but the one to the north may conceivably have been occupied by a guard. Flanking niches are a feature typical of gates, in Byzantium and elsewhere,¹²⁶ and the motif may have been recognized and understood to indicate that the doorway to the rooms south of the atrium was not just a passage within one and the same building, but a major entrance to a separate entity.

The importance of the doorway is also reflected in the mosaic decoration of the vestibule. The northern and southern bays above the doors to the narthex and to the exterior originally looked alike, before the figural mosaics above the door to the narthex were added, but the central bay above the western doorway was always distinguished by a special ornamentation, in particular the two large medallions with crosses, the only outstanding features among the carpet patterns. The eastern cross is placed opposite the doorway high up on the east wall, too high to be well appreciated from inside the narrow vestibule (fig. 4), but in a good position for anybody coming down the stairs from the rooms south of the atrium. From this more elevated and distant viewpoint the cross would be inside the normal field of view. The eastern cross is also placed off-center toward the south, corresponding to the similarly eccentric position of the door connecting the intermediate chamber and the rooms south of the atrium, from whence the intended viewer would approach.

The other cross on the west wall of the central bay is in the lowest possible position above the doorway

126 A. K. Orlandos, *Μοναστηριακή αρχιτεκτονική* (Athens, 1958), 17–26; P. Niewöhner, “St. Benoît in Galata: Der byzantinische Ursprungsbau,” *JDAI* 125 (2010): 155–242, esp. 192–94, 225 fig. 88.

(fig. 10), so that it may be noticed from inside the vestibule and confer distinction upon the passage to the rooms south of the atrium. Entrances and gates were commonly decorated with crosses, for example the bronze doors of Hagia Sophia,¹²⁷ and there are countless door lintels with crosses throughout the early Byzantine empire.¹²⁸

The grand western doorway of the vestibule was important because the rooms south of the atrium contained a spiral staircase giving direct access to the Great Sekreton of the patriarchal palace. The staircase has since been replaced by Sinan's minaret,¹²⁹ but it left traces that could be seen in the nineteenth century (fig. 5).¹³⁰ Through a small anteroom that was also affected by the building of the minaret, the staircase connected to the west door of the Great Sekreton.¹³¹

The fact that the patriarch resided on the upper floor and had a special staircase to himself is repeatedly mentioned in the written sources.¹³² After an audience with the patriarch Kyriakos (596–606), Theodore of Sykeon is said to have come down a “private spiral staircase,” at the foot of which he was met at a door of the same name by a supplicant.¹³³ The patriarch Michael

Keroularios locked his doors as well as the entrance to the spiral staircase when, shortly before the abdication of Michael VI (1057), partisans of Isaac Komnenos gathered before Hagia Sophia and shouted that he should come down.¹³⁴ The western doorway of the vestibule may have served as a main entrance to the rooms south of the atrium, the Private Spiral Staircase, and the patriarchal palace, and may possibly be identified with the so-called Private Door in the *Life of Theodore*. The door may have been called private due to its proximity to the Private Spiral Staircase, which seems to have been neither accessible nor visible to the general public.

The *Book of Ceremonies* describes another occasion, the Feast of the Exaltation of the Cross, on which the emperor was regularly received by the patriarch in the Great Sekreton and afterward left via the Great Spiral Staircase, passed the Didaskalion, descended “another flight of stairs,” then entered the church through the Great Door of the narthex and arrived at the Royal Door.¹³⁵ The Great Spiral Staircase may be an alternative name for the Private Spiral Staircase of the other sources and in this case derived from the proximity to the Great Sekreton. The rooms south of the atrium should therefore contain the Didaskalion¹³⁶ as well as the Great/Private Spiral Staircase. This makes sense because the location close to but outside the church proper would have been suitable for the instruction of the catechumens, after which the Didaskalion seems to have been named.¹³⁷ The “other flight of stairs”

127 Antoniades, *Ἐκφρασις* (n. 2 above), 1:157–59; F. Dirimtekin, “The Bronze Doors of Saint Sophia,” *Annual of Ayasofya Museum* 3 (1961): 42–46; A. Guiglia Guidobaldi and C. Barsanti, “Le porte e gli arredi architettonici in bronzo della Santa Sofia di Costantinopoli,” in *Le porte del paradiso: Arte e tecnologia bizantina tra Italia e Mediterraneo 11–12 secolo*, ed. A. Iacobini, *Milion* 7 (Rome, 2009), 81–123.

128 E.g., in situ above the “Sekreton gate” of the baptistery next to the church of St. John at Ephesus: E. Russo, “La scultura a Efeso in età paleocristiana e bizantina,” in *Efeso paleocristiana e bizantina*, ed. O. Kresten et al., *Archäologische Forschungen 3 = DenkWien* 282 (Vienna, 1999), 26–53, 44–45, pls. 19, 46; A. Thiel, *Die Johanneskirche in Ephesos, Spätantike, frühes Christentum, Byzanz, Reihe B, Studien und Perspektiven* 16 (Wiesbaden, 2005), pls. 32, 96.

129 W. Emerson and R. L. Van Nice, “Hagia Sophia and the First Minaret Erected after the Conquest of Constantinople,” *AJA* 54 (1950): 28–40.

130 J. Ebersolt, *Sainte-Sophie de Constantinople, étude de topographie d'après les cérémonies* (Paris, 1910), 29, n. 1. Cf. F. Dirimtekin, “Le local du Patriarcat” (n. 5 above), 113–27, esp. 127.

131 Cormack and Hawkins, “Rooms Above” (n. 13 above), 178, pl. 5, door beneath mosaic fragment D.

132 Guillard, “Le Thomaïtes et le Patriarcat” (n. 121 above), 30–31.

133 *Vie de Théodore de Sykéon*, ed. A.-J. Festugière, *Subsidia hagiographica* 48 (Brussels, 1970), §93. Mango, *Brazen House* (n. 122 above), 54, identifies the staircase with the southwest ramp, but the latter is neither private nor directly related to the patriarchal palace.

134 George Kedrenos, *Synopsis historion* 2:635. Mango, *Brazen House* (n. 122 above), 54, identifies the staircase with the southwest ramp that leads to the galleries. This makes little sense, because (a) there were numerous other ways of accessing the galleries and (b) the patriarchal palace was protected from the galleries by said locked doors.

135 *Book of Ceremonies* 1.31 (22) R 126 (n. 122 above).

136 C. Strube, *Die westliche Eingangsseite der Kirchen von Konstantinopel in justinianischer Zeit: Architektonische und quellenkritische Untersuchungen*, *Schriften zur Geistesgeschichte des östlichen Europa* 6 (Wiesbaden, 1973), 53–54. Schneider, *Westhof* (n. 5 above), 43–44, locates the Didaskalion to the north of the atrium, but this is incompatible with the written sources, as Strube (*Eingangsseite*, n. 166) points out. Equally untenable is Schneider's identification of the rooms south of the atrium with the Horologion (*Westhof*, 44), because according to the *Book of Ceremonies*, the emperor passed the Horologion on his way from the Augustaion to the Beautiful Door, the south door of the Vestibule. Thus it must have been situated farther south. Cf. Dárk and Kostenec, “Paul the Silentiary's Description” (n. 5 above), 93 n. 12, for the same mistake.

137 Antoniades, *Ἐκφρασις* (n. 2 above), 1:66.

must have led from the elevated floor level of the rooms south of the atrium down to the portico to the west of the narthex and its Great Door; it was probably located in the large doorway that connected the east end of that portico and the rooms south of the atrium (fig. 5).¹³⁸

On the Feast of Orthodoxy the emperor entered the Great Sekreton without the patriarch, who was at that time leading a procession through the city, descended via the Great Spiral Staircase, passed the Didaskalion, and went down the “other flight of stairs,” but this time he did not enter the Great Narthex, but turned left toward the Athyr, some unspecified location at the western outskirts of the cathedral complex.¹³⁹ Here he met the patriarch on his return from the procession, after which they jointly entered the church by the narthex and the Royal Door (fig. 5).¹⁴⁰

On the day of the consecration of patriarch Theophylaktos in 933, the emperor once more descended the Great Spiral Staircase without the patriarch and on this occasion met him at the Beautiful Door, from where they entered the church together.¹⁴¹ The Beautiful Door can be identified with the south door of the vestibule,¹⁴² which Michael III (842–867) fitted

with a pair of ornate ancient bronze door leaves.¹⁴³ It seems, therefore, that on this occasion the emperor left the rooms south of the atrium through the door that enters the vestibule from the west (fig. 5).

The association with the patriarchate can also explain why the vestibule imitated the narthex in so many ways: the tripartite groin vault and the deeply colored geometrical mosaics that clash with the light color and natural forms of the lower zone. As the lobby of the patriarchate, the vestibule was apparently conceived as equivalent to the narthex and fashioned after it. As the latter was focused centrally on the main east door to the naos, so was the vestibule focused on its main west door to the patriarchate, and this was emphasized by the same centralizing groin vaults with similar geometric mosaics as well as by the crosses above and opposite that doorway. These features make sense only in light of the vestibule’s function as the lobby of the patriarchate and must have been a major concern when it was first planned and built.

In the middle Byzantine period, the vestibule acquired another function as an imperial entrance to the church. This is most forcefully expressed by the mosaic above the door to the narthex, which is best perceived on entering the vestibule from the south (fig. 4). This entrance served as a southern alternative to the main western access of the narthex. On various major holidays the emperor left the palace, crossed the Augustaion, the large open square to the south of Hagia Sophia and the patriarchate,¹⁴⁴ passed the Horologion, a monumental clock,¹⁴⁵ and entered the church through the vestibule or Propylon of the Narthex, as it is called in the *Book of Ceremonies*. The emperor entered by the Beautiful Door, took off his crown behind some curtains, which served as an improvised Metatorium, and met the patriarch at the Door to the Narthex, from which they jointly continued toward the Royal Door (fig. 5).¹⁴⁶

138 Strube, *Eingangseite*, 16, fig. 1, pl. 1.

139 Ibid., 54–56.

140 *Book of Ceremonies* 1.37 (28) R 156–58 (n. 122 above).

141 *Book of Ceremonies* 2.38: *Constantini Porphyrogeniti imperatoris De cerimoniis aulae Byzantinae libri duo*, ed. J. J. Reiske, CSHB 16–17, 2 vols. (Bonn, 1829–30), 1:636.

142 Antoniadès, *Ἐκφρασις* (n. 2 above), 1:146–49; Strube, *Eingangseite*, 50–52. Cormack and Hawkins, “Rooms Above” (n. 13 above), 248–49 n. 184, refute this identification for no obvious reason and consider the Beautiful Door identical with the west door of the portico between the atrium and the narthex; they also insist on the by then outdated assumption that the Great Spiral Staircase was identical with the southwest ramp, which appears to be an altogether nonsensical alternative: (a) it is not obvious that the southwest ramp should be called Great, as it is the smallest ramp and not connected to the Great Sekreton; (b) for the same reason the emperor, according to Cormack and Hawkins, would have had to make a detour via the galleries every time he left the Great Sekreton for the Great Spiral Staircase, but no such detour is ever recorded; (c) neither the Didaskalion nor the other flight of stairs is accounted for by Cormack and Hawkins; (d) the emperor, according to Cormack and Hawkins, always entered the narthex from the west, never from the south, and therefore once again would have had to make considerable detours on numerous occasions, none of which is mentioned in the *Book of Ceremonies*; (e) there is no reason the emperor should have gone out of his way to avoid a perfectly good spiral staircase and an even better vestibule, where the figural mosaic above the door to the narthex shows two emperors; (f) there is no reason the otherwise concise *Book*

of Ceremonies should sometimes describe the same western entrance differently (mentioning the Beautiful Door and the Propylon of the Narthex) and on precisely those occasions also use different terms for the same door (Door to the Narthex as opposed to Great Door).

143 Antoniadès, *Ἐκφρασις* (n. 2 above), 1:146–49; Guidobaldi and Barsanti, “Le porte” (n. 127 above).

144 Mango, *Brazen House* (n. 122 above), 42–47.

145 Antoniadès, *Ἐκφρασις* (n. 2 above), 1:119–22; R. Janin, *Constantinople byzantine: Développement urbain et répertoire topographique*, 2nd ed., AOC 4A (Paris, 1964), 102–3.

146 *Book of Ceremonies* 1.1 (R 14) (n. 122 above); G. Dagron, *Empereur et prêtre: Étude sur le “césaropapisme” byzantine* (Paris,

This route is attested only from the middle Byzantine period onward; earlier, the emperor entered from the west via the atrium and took off his crown in the narthex.¹⁴⁷ The vestibule may not have been built with the intention of changing this—the alternative southern route may have come about later as an afterthought, when the atrium went out of fashion.¹⁴⁸ The southern entrance through the vestibule had the advantage of being closer to the imperial palace, and the installation of the beautiful ancient door leaves by Michael III as well as the later addition of the imperial mosaic above the door to the narthex may reflect its gradual appropriation by the emperor.

It is tempting to think that the small door at the northern end of the east wall of the vestibule and the cupboardlike room behind it may have contained whatever was needed for the emperor to remove his crown before entering the church.¹⁴⁹ Of course this would not have been the original function of the room, as the emperor was presumably still passing through the atrium when the vestibule was built in the later sixth century. Originally, the cupboardlike room would have been an architectural stopgap and was not necessarily assigned any liturgical purpose.¹⁵⁰

1996), 106–9; G. P. Majeska, “The Emperor in His Church: Imperial Ritual in the Church of St. Sophia,” in *Byzantine Court Culture from 829 to 1204*, ed. H. Maguire (Washington, D.C., 1997), 39–51.

147 Strube, *Eingangsseite* (n. 136 above), 65–68.

148 Ibid., 55–56. New churches were regularly built without a forecourt after the end of the early Byzantine period, that is, from the seventh century onward: C. Delvoye, “Atrium,” *RBK* 1:425.

149 Antoniadēs, *Ἐκφρασις* (n. 2 above), 1:151–52.

150 A later use as a wardrobe may be paralleled in the southeast vestibule, where the emperor was re-crowned behind another curtain before leaving the church: *Book of Ceremonies* 1.1, 2, 9, 32, 35 (R 18, 39, 68, 135, 145) (n. 122 above). The southeast vestibule can be identified as the Tetracyon of the Holy Well, used to connect the exterior to the east with the south aisle to the west, a southeast staircase to the south, and the chapel of St. Nicholas to the north: Mango, *Brazen House* (n. 122 above), 60–72. The staircase and the chapel have since fallen prey to two buttresses and the former door to the staircase has been plastered over, but the former chapel door remains. This huge doorway is itself the size of a very large cupboard or a small room; its ancient marble jambs were at some point carved in the same patterns as the ninth-century casing of the tie beams in the west gallery. For the carving of the door jambs see Mango, *Brazen House*, fig. 8. For the casing of the tie beams see C. D. Sheppard, “A Radiocarbon Date for the Wooden Tie Beams in the West Gallery of St. Sophia, Istanbul,” *DOP* 19 (1965): 237–40; C. D. Sheppard, “Byzantine Carved Marble Slabs,” *ArtB* 51 (1969): 65–71, fig. 13. After the rear of

The modern use of the vestibule as a main exit is inconsistent with the sumptuous mosaic decoration of its high walls and vaults and does not reflect Byzantine usage. In its original function as anteroom of the patriarchate the vestibule would not have been passed by crowds, as the patriarchate was itself too small to accommodate a large number of people. Later, when the emperor entered the church through the vestibule, it is likely that the people did not; emperor and subjects could not have passed each other in the narrow room, and while the emperor took off his crown, the passage was surely blocked completely. The vestibule may in fact have been chosen as the imperial entrance because it afforded separation from the people in the atrium and narthex, and the emperor could take off his crown unobserved, as protocol required. The Ottoman closure of the doors to the ramp and to the rooms south of the atrium deprived the vestibule of any function, turning it from an exclusive place into a pointless corridor.

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the doorway was blocked by the buttress, the front was also screened off by the insertion of a templon that was subsequently turned into a curtain wall: Antoniadēs, *Ἐκφρασις* (n. 2 above), 2: pl. 58. The result is a cupboardlike room like that in the southwest vestibule, and it may have served the same purpose, though only after the doorway to the chapel of St. Nicholas had been blocked by the buttress. The date of the buttress is unknown, but the chapel was extant in the fourteenth century, when it was mentioned as “still existing” by Nikephoros Kallistos and then described by the anonymous Russian pilgrim: Mango, *Brazen House*, 68 (for Nikephoros Kallistos); G. P. Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries*, DOS 19 (Washington, D.C., 1984), 223–25. For the buttress cf. R. J. Mainstone, *Hagia Sophia: Architecture, Structure and Liturgy of Justinian’s Great Church* (New York, 1988), 102–5.

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